

**APPENDIX A**

**REQUIREMENTS UNDER 40 CFR PART 63, SUBPART S  
NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS  
(NESHAPS) FROM THE PULP AND PAPER INDUSTRY**

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## Summary of requirements

Applicable Requirement	Condition Number	Pollutant/ Parameter	Limit/ Standard	Averaging Time	Testing Condition	Monitoring Condition
40 CFR 63.441 40 CFR 63.961	1	Definitions	n/a	n/a	n/a	n/a
40 CFR 63.453(o)	2	Operating out of parameter range is violation of std.	n/a	n/a	n/a	n/a
40 CFR 63.455(b)	3	Progress reports	n/a	n/a	n/a	n/a
40 CFR 63.6(e)(3)	7	SSM Plan	n/a	n/a	n/a	n/a

**DEFINITIONS**

## 1. Definitions.

- 1.a. The terms used in the section(s) of this permit that are specifically intended to implement Subpart S --National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry, 40 CFR 63.440 through 63.459, shall have the meaning given them in 40 CFR 63.441, Definitions. [40 CFR 63.441]
- 1.b. The terms used in the section(s) of this permit that are specifically intended to implement Individual Drain System requirements, as specified in Subpart S -- National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry, shall have the meaning given them in 40 CFR 63.961, Definitions. [40 CFR 63.961]
- 1.c. The terms used in the section(s) of this permit that are specifically intended to implement the NESHAP General Provisions, 40 CFR 63 Subpart A, shall have the meaning given them in 40 CFR 63.2, Definitions. [40 CFR 63.961]
- 1.d. "Named streams" means the pulping process condensates from the equipment systems listed below [40 CFR 63.446(b)] . Named streams specific to the facility addressed by this permit are specified in Condition 26.
  - 1.d.i. Each digester system;
  - 1.d.ii. Each turpentine recovery system;
  - 1.d.iii. Each evaporator system condensate from:
    - 1.d.iii.(1) The vapors from each stage where weak liquor is introduced (feed stages); and
    - 1.d.iii.(2) Each evaporator vacuum system for each stage where weak liquor is introduced (feed stages).
  - 1.d.iv. Each HVLC collection system; and
  - 1.d.v. Each LVHC collection system.
- 1.e. "Other streams" means HAP-containing condensate streams that are not named streams.

## VIOLATION OF THE STANDARD

2. The permittee shall operate the control devices used to comply with the sections of this permit that pertain to the Pulp and Paper NESHAP (40 CFR Part 63, Subpart S), in a manner consistent with the minimum or maximum (as appropriate) operating parameter value or procedure required to be monitored that pertain to the Pulp and Paper NESHAP. Except as provided in Conditions 9.d, 11.e, and 35, operation of the control device below minimum operating parameter values or above maximum operating parameter values established in this permit or failure to perform procedures required by this permit shall constitute a violation of the applicable emission standard and be reported as a period of excess emissions. [40 CFR 63.453(o)]

## PROGRESS REPORTS AND PLAN UPDATES

3. Applicable Requirement The permittee shall submit Progress Reports and Plan Updates as specified in this Condition. [40 CFR 63.455(b)]
  - 3.a. Schedule of submittals:
    - 3.a.i. By April 15, 2003, submit a Plan Update and Progress Report.
    - 3.a.ii. By April 15, 2005, submit a Plant Update and Progress Report.
  - 3.b. Plan Updates are non-binding descriptions of the permittee's chosen method(s) to achieve compliance with all Conditions for which compliance has not yet been achieved. Plan updates shall include the information specified in 40 CFR 63.455(b).
  - 3.c. Progress Reports shall describe progress made to date toward achieving compliance with all Conditions for which compliance has not yet been achieved.

## CMS QUALITY CONTROL PROGRAM

4. Applicable Requirement A CMS quality control program as required by 40 CFR 63.8(d)(2) shall be developed by October 12, 2001. The CMS quality control procedures shall be kept on record as required by 40 CFR 63.8(d)(3). [40 CFR 63.8(d)(2) and 63.8(d)(3)]

## REPORTING REQUIREMENTS FOR SUBPARTS A AND S

### Immediate Reporting

5. The permittee shall provide immediate reporting, as specified in this Condition, for the following:
  - 5.a. Any time an action is taken during a startup, shutdown or malfunction that is not consistent with the procedures specified in the SSM plan, the permittee shall report the actions taken. [40 CFR 63.10(d)(5)(ii)]
    - 5.a.i. The report shall be submitted by phone or fax within 2 working days after commencing actions inconsistent with the plan. For the purpose of this Condition, working days are Monday through Friday, excluding holidays observed by the Department.

- 5.a.ii. If requested by the Department, the permittee shall report the actions taken in a letter within 7 working days after receiving the Department's request.
- 5.b. For those malfunctions or other events that affect the CMS and are not addressed by the SSM plan, the permittee shall report the actions taken if those actions are not consistent with the SSM plan. [40 CFR 63.8(c)(1)(ii)]
  - 5.b.i. The permittee shall make an initial report by phone or fax within 24 hours of commencing actions that are not consistent with the SSM plan.
  - 5.b.ii. The permittee shall submit a follow-up written report within 2 weeks of commencing actions that are not consistent with the SSM plan.

#### Semiannual Reporting

- 6. The permittee shall submit semiannual Summary Reports and (if required) Excess Emissions and Continuous Monitoring System Performance Reports in accordance with the following: [40 CFR 63.10(e)(3)]
  - 6.a. The semiannual reports shall be submitted by the same dates as the annual and semiannual reports required in the permittee's Title V permit. [40 CFR 63.10(a)(5)]
  - 6.b. The Summary Report shall contain the information specified below: [40 CFR 63.10(e)(3)(vi)]
    - 6.b.i. The company name and address of the affected source; [40 CFR 63.10(e)(3)(vi) (A)]
    - 6.b.ii. An identification of each hazardous air pollutant monitored at the affected source; [40 CFR 63.10(e)(3)(vi) (B)]
    - 6.b.iii. The beginning and ending dates of the reporting period; [40 CFR 63.10(e)(3)(vi) (C)]
    - 6.b.iv. A brief description of the process units; [40 CFR 63.10(e)(3)(vi) (D)]
    - 6.b.v. The emission and operating parameter limitations specified in the relevant standard(s); [40 CFR 63.10(e)(3)(vi) (E)]
    - 6.b.vi. The monitoring equipment manufacturer(s) and model number(s); [40 CFR 63.10(e)(3)(vi) (F)]
    - 6.b.vii. The total operating time of the affected source during the reporting period; [40 CFR 63.10(e)(3)(vi) (H)]
    - 6.b.viii. A description of any changes in CMS, processes, or controls since the last reporting period; [40 CFR 63.10(e)(3)(vi) (K)]
    - 6.b.ix. The name, title, and signature of the responsible official who is certifying the accuracy of the report; [40 CFR 63.10(e)(3)(vi) (L)] and
    - 6.b.x. The date of the report. [40 CFR 63.10(e)(3)(vi) (M)]
  - 6.c. If required, the Excess Emissions and Continuous Monitoring System Performance Report shall include the following emissions information:

- 6.c.i. the specific identification (i.e., date and time of commencement and completion) of each period of excess emissions and parameter monitoring exceedances that occurs during startups, shutdowns and malfunctions of the affected source; [40 CFR 63.10 (c)(7)]
- 6.c.ii. the specific identification (i.e., date and time of commencement and completion) of each period of excess emissions and parameter monitoring exceedances that occurs during periods other than startups, shutdowns and malfunctions of the affected source. [40 CFR 63.10 (c)(8)]
- 6.c.iii. An emission data summary (or similar summary if the owner or operator monitors control system parameters), including: [40 CFR 63.10(e)(3)(vi)(I)]
  - 6.c.iii.(1) the total duration of excess emissions during the reporting period (recorded in minutes for opacity and hours for gases),
  - 6.c.iii.(2) the total duration of excess emissions expressed as a percent of the total source operating time during that reporting period, and
  - 6.c.iii.(3) a breakdown of the total duration of excess emissions during the reporting period into those that are due to startup/shutdown, control equipment problems, process problems, other known causes, and other unknown causes.
- 6.d. If required, the Excess Emissions and Continuous Monitoring System Performance Report shall include the following information on CMS performance:
  - 6.d.i. the date and time identifying each period in which the CMS was inoperative except for zero (low-level) and high-level checks; [40 CFR 63.10(c)(5)]
  - 6.d.ii. the date and time identifying each period in which the CMS was out of control; [40 CFR 63.10 (c)(6)]
  - 6.d.iii. A CMS performance summary (or similar summary if the owner or operator monitors control system parameters), including: [40 CFR 63.10(e)(3)(vi)(J)]
    - 6.d.iii.(1) the total CMS downtime during the reporting period (recorded in hours),
    - 6.d.iii.(2) the total duration of CMS downtime expressed as a percent of the total source operating time during that reporting period, and
    - 6.d.iii.(3) a breakdown of the total CMS downtime during the reporting period into periods that are due to monitoring equipment malfunctions, nonmonitoring equipment malfunctions, quality assurance/quality control calibrations, other known causes, and other unknown causes.
- 6.e. If the total duration of excess emissions or process or control system parameter exceedances for the reporting period is less than 1 percent of the total operating time for the reporting period, and CMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the Summary Report shall be submitted, and the full Excess Emissions and Continuous Monitoring System Performance Report need not be submitted unless required by the Administrator. [40 CFR 63.10(e)(3)(vii)]

- 6.f. If the total duration of excess emissions of process or control system parameter exceedances for the reporting period is 1 percent or greater of the total operating time for the reporting period, and CMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, both the Summary Report and the Excess Emissions and Continuous Monitoring System Performance Report shall be submitted. [40 CFR 63.10(e)(3)(viii)]

#### STARTUP, SHUTDOWN AND MALFUNCTION (SSM) PLAN

7. Applicable Requirement The permittee shall develop and implement a written Startup, Shutdown and Malfunction Plan (SSM Plan) in accordance with 40 CFR 63.6(e)(3) and the following schedule: [40 CFR 63.6(e)(3)]
- 7.a. By no later than April 16, 2001, the SSM Plan shall have been completed and address the following:
- 7.a.i. the pulping system control requirements specified in 40 CFR 63.443, except for the equipment systems specified in 40 CFR 63.443(a)(1)(ii) through 63.443(a)(1)(v);
  - 7.a.ii. the bleaching system control requirements specified in 40 CFR 63.445;
  - 7.a.iii. the kraft pulping process condensates as specified in 40 CFR 63.446; and
  - 7.a.iv. all routine or otherwise predictable CMS malfunctions for CMS associated with compliance monitoring for the above.
- 7.b. By no later than April 17, 2006, the SSM Plan shall address the following:
- 7.b.i. the pulping system control requirements for the equipment systems specified in 40 CFR 63.443(a)(1)(ii) through 63.443(a)(1)(v); and
  - 7.b.ii. all routine or otherwise predictable CMS malfunctions for CMS associated with compliance monitoring for the above.
- 7.c. The SSM plan and all revisions to the SSM plan are hereby incorporated into this permit for so long as 40 CFR 63 Subpart A shall require that the SSM plan be incorporated into the permit by reference.
- 7.d. In the event that the requirement to incorporate the SSM Plan by reference into the permit is deleted from 40 CFR 63 Subpart A, Condition 7.c shall become null and void.

**PULPING SYSTEM REQUIREMENTS (LVHC/HVLC SYSTEMS)****Summary of requirements**

Applicable Requirement	Condition Number	Pollutant/Parameter	Limit/Standard	Averaging Time	Testing Condition	Monitoring Condition
40 CFR 63.443(a)	9	LVHC HAPs, 4/16/2001 thru 4/16/2006 *	Capture and control	n/a	n/a	10
40 CFR 63.443(a)	11	LVHC and HVLC HAPs, after 4/16/2006 *	Capture and control	n/a	n/a	12
40 CFR 63.443(d)(3)	13	Thermal oxidizer, 20 ppm opt.	Emit no more than 20 ppmv HAP		14a	15
	9.c.ii	Boiler or lime kiln	Introduce HAPs with fuel or into flame zone	n/a	n/a	n/a

\* NOTE: Conditions 9 and 10 are effective from April 16, 2001, through April 16, 2006. On April 17, 2006, Conditions 9 and 10 shall be superseded by Conditions 11 and 12.

8. The LVHC and HVLC equipment that is subject to the 40 CFR Part 63, Subpart S requirements in this permit is specified in the SSM plan which is incorporated by reference [40 CFR Part 63, Subpart S]

**LVHC System only, April 16, 2001 through April 16, 2006**

9. **Applicable Requirement** On and after April 16, 2001, the permittee shall comply with the requirements in this Condition. On April 17, 2006, this Condition becomes void and shall be superseded by Condition 11. [40 CFR 63.440(d)]
- 9.a. Each LVHC system shall be enclosed and vented into a closed-vent system and routed to a control device that meets the requirements specified in Condition 9.c. [40 CFR 63.443(a)]
- 9.b. The enclosures and closed-vent system shall meet the requirements specified in Condition 37. [40 CFR 63.443(c)]
- 9.c. The control device(s) used to reduce total HAP emissions from each LVHC system shall:
- 9.c.i. Reduce the total HAP concentration at the outlet of the thermal oxidizer to 20 parts per million (ppm) or less by volume, corrected to 10 percent oxygen on a dry basis [40 CFR 63.443(d)(2)] ; or
- 9.c.ii. Reduce total HAP emissions using a boiler, lime kiln or recovery furnace by introducing the HAP emission stream with the primary fuel or into the flame zone. [40 CFR 63.443(d)(4)]

9.d. Periods of excess emissions shall not be a violation of this Condition provided that the time of excess emissions (excluding periods of Startup, Shutdown, or Malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed the following levels: [40 CFR 63.443(e)]

9.d.i. One percent for control devices used to reduce the total HAP emissions from the LVHC system.

9.d.ii. Periods of excess emissions include the periods described below, except as noted:

9.d.ii.(1) All periods during which any equipment included in the LVHC system is operating, and

9.d.ii.(1)(a) A control device is not in use; or

9.d.ii.(1)(b) A control device is in use but is functioning outside the required parameter range; or

9.d.ii.(1)(c) One or more LVHC main vent valves is/are open.

9.d.ii.(1)(c)(1) Concurrent periods of time when multiple main vent valves are open will be counted as a single "venting time".

9.d.ii.(1)(c)(2) "Main vent valve" means any valve that, when open, will allow all LVHC and/or HVLC gases to bypass the control device(s) and be emitted directly to atmosphere without treatment. The main vent valves are listed in the SSM Plan.

9.d.ii.(2) Periods of excess emissions do not include periods in which a Startup, Shutdown or Malfunction of the control device(s) is occurring.

9.d.ii.(3) Typically closed emergency valves, including but not limited to pressure-vacuum-relief (PVR) valves, water seals, rupture discs, sample valves, drain valves, etc., shall not be included in the determination of excess emissions.

10. Monitoring Requirement On and after April 16, 2001, the permittee shall monitor the parameters specified in this Condition whenever any equipment included in the LVHC system is operating. On April 17, 2006, this Condition becomes void and shall be superseded by Condition 12.

10.a. All periods in which the LVHC system is operating shall be recorded.

10.b. All periods in which a Startup, Shutdown or Malfunction of the control device(s) is occurring shall be recorded.

10.c. All periods in which a control device is not in use shall be recorded.

10.d. All periods in which a control device is in use but is functioning outside the required parameter range shall be recorded.

10.e. All periods of bypassing from the LVHC main vents.

10.e.i. Bypassing shall be monitored at least once every 15 minutes by use of a flow indicating device installed in each bypass line, or by use of any indicating device(s) that provide(s) a positive indication of bypassing. [40 CFR 63.450(d)]

10.e.ii. The duration of the use of bypass valves on computer controlled valves. [40 CFR 63.454(b)(12)]

(Note: Monitoring of manually controlled valves is addressed in the Closed Vent System monitoring.)

- 10.f. Recordkeeping The permittee shall maintain records of the information specified in this Condition.
- 10.f.i. The total operating time of the LVHC system during each semi-annual period [40 CFR 63.10(c)(13).
  - 10.f.ii. The date, time and duration of all periods in which a control device was not in use.
  - 10.f.iii. The date, time and duration of all periods in which a control device was in use but was functioning outside the required parameter range.
  - 10.f.iv. The date, time and duration of all periods of bypassing from the LVHC main vent valve(s). [40 CFR 63.454(b)(12)]

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- 10.f.v. the occurrence and duration of each startup, shutdown or malfunction [40 CFR 63.10(b)(2)(i)];
- 10.f.vi. the occurrence and duration of each malfunction of air pollution control equipment [40 CFR 63.10(b)(2)(ii)];
- 10.f.vii. all major maintenance performed on the air pollution control equipment [40 CFR 63.10(b)(2)(iii)].
- 10.f.viii. actions taken during periods of startup, shutdown or malfunction when such actions are different from procedures specified in the SSM plan [40 CFR 63.10(b)(2)(iv)];
- 10.f.ix. actions taken during periods of startup, shutdown or malfunction when such actions are consistent with procedures specified in the SSM plan [40 CFR 63.10(b)(2)(v)].
- 10.f.x. the date and time of commencement and completion of each period of excess emissions and parameter monitoring exceedences that occur during startup, shutdown or malfunction of the affected source [40 CFR 63.10(c)(7)];
- 10.f.xi. the date and time of commencement and completion of each period of excess emissions and parameter monitoring exceedences that occurs during periods other than startup, shutdown or malfunction of the affected source [40 CFR 63.10(c)(8)];
- 10.f.xii. the nature and cause of any malfunction (if known) [40 CFR 63.10(c)(10)];
- 10.f.xiii. the corrective action taken or preventive measures adopted [40 CFR 63.10(c)(11)].
- 10.f.xiv. each period in which a CMS is malfunctioning or inoperative (including out of control periods) [40 CFR 63.10(b)(2)(vi)];
- 10.f.xv. all required measurements needed to demonstrate compliance with a relevant standard, as required in the relevant monitoring Condition(s) [40 CFR 63.10(b)(2)(vii)];
- 10.f.xvi. all measurements as may be necessary to determine the conditions of performance tests and performance evaluations, as required in the relevant monitoring Condition(s) [40 CFR 63.10(b)(2)(ix)];
- 10.f.xvii. all CMS calibration checks [40 CFR 63.10(b)(2)(x)];
- 10.f.xviii. all adjustments and maintenance performed on CMS [40 CFR 63.10(b)(2)(xi)];
- 10.f.xix. all required CMS measurements [40 CFR 63.10(c)(1)];

- 10.f.xx. the date and time identifying each period during which the CMS was inoperative except for zero (low-level) and high-level checks [40 CFR 63.10(c)(5)];
- 10.f.xxi. the nature of the repairs or adjustments to the CMS that was inoperative or out of control [40 CFR 63.10(c)(12)];

LVHC and HVLC Systems on and after April 17, 2006

- 11. Applicable Requirement On and after April 17, 2006, the permittee shall comply with the following requirements for the pulping system: [40 CFR 63.440(d)]
  - 11.a. Each LVHC system shall be enclosed and vented into a closed-vent system and routed to a control device that meets the requirements specified in this Condition. [40 CFR 63.443(a)]
  - 11.b. Each HVLC system shall be enclosed and vented into a closed-vent system and routed to a control device that meets the requirements specified in this Condition. The equipment systems that are subject to this Condition are listed below. [40 CFR 63.443(a)]
    - 11.b.i. Each knotter or screen system with total HAP mass emission rates greater than or equal to the rates specified in paragraphs (1) or (2), below, or the combined rate specified in paragraph (3), below:
      - 11.b.i.(1) Each knotter system with emissions of 0.05 kilograms or more of total HAP per megagram of ODP (0.1 pounds per ton).
      - 11.b.i.(2) Each screen system with emissions of 0.10 kilograms or more of total HAP per megagram of ODP (0.2 pounds per ton).
      - 11.b.i.(3) Each knotter and screen system with emissions of 0.15 kilograms or more of total HAP per megagram of ODP (0.3 pounds per ton).
    - 11.b.ii. Each pulp washing system;
    - 11.b.iii. Each decker system that:
      - 11.b.iii.(1) Uses any process water other than fresh water or paper machine white water; or
      - 11.b.iii.(2) Uses any process water with a total HAP concentration greater than 400 parts per million by weight; and
    - 11.b.iv. Each oxygen delignification system.
  - 11.c. The enclosures and closed-vent system shall meet the requirements specified in Condition 37. [40 CFR 63.443(c)]
  - 11.d. The control device(s) used to reduce total HAP emissions from each equipment system listed in paragraphs (a) and (b) of this Condition shall:
    - 11.d.i. Reduce total HAP emissions by 98 percent or more by weight [40 CFR 63.443(d)(1)] ; or
    - 11.d.ii. Reduce the total HAP concentration at the outlet of the thermal oxidizer to 20 parts per million or less by volume, corrected to 10 percent oxygen on a dry basis [40 CFR 63.443(d)(2)] ; or

- 11.d.iii. Reduce total HAP emissions using a thermal oxidizer designed and operated in accordance with Condition 13 [40 CFR 63.443(d)(3)] ; or
- 11.d.iv. Reduce total HAP emissions using one of the following: [40 CFR 63.443(d)(4)]
  - 11.d.iv.(1) A boiler, lime kiln or recovery furnace by introducing the HAP emission stream with the primary fuel or into the flame zone; or
  - 11.d.iv.(2) A boiler or recovery furnace with a heat input capacity greater than or equal to 44 megawatts (150 million BTU per hour) by introducing the HAP emission stream with the combustion air.
- 11.e. Periods of excess emissions shall not be a violation of paragraphs (c) and (d) of this Condition provided that the time of excess emissions (excluding periods of startup, shutdown, or malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed the following levels: [40 CFR 63.443(e)]
  - 11.e.i. One percent for control devices used to reduce the total HAP emissions from the LVHC system; and
  - 11.e.ii. Four percent for control devices used to reduce the total HAP emissions from the HVLC system; and
  - 11.e.iii. Four percent for control devices used to reduce the total HAP emissions from both the LVHC and HVLC systems.
  - 11.e.iv. Periods of excess emissions include the periods described below, except as noted:
    - 11.e.iv.(1) All periods during which any equipment included in the LVHC and HVLC systems is operating and
      - 11.e.iv.(1)(a) A control device is not in use; or
      - 11.e.iv.(1)(b) A control device is in use but is functioning outside the required parameter range; or
      - 11.e.iv.(1)(c) One or more LVHC and/or HVLC main vent valves is/are open.
        - 11.e.iv.(1)(c)(1) Concurrent periods of time when multiple main vent valves are open will be counted as a single "venting time".
        - 11.e.iv.(1)(c)(2) "Main vent valve" means any valve that, when open, will allow all LVHC and/or HVLC gases to bypass the control device(s) and be emitted directly to atmosphere without treatment. The main vent valves are listed in the SSM Plan.
    - 11.e.iv.(2) Periods of excess emissions do not include periods in which a Startup, Shutdown or Malfunction of the control device(s) is occurring.
    - 11.e.iv.(3) Typically closed emergency valves, including but not limited to pressure-vacuum-relief (PVR) valves, water seals, rupture discs, sample valves, drain valves, etc., shall not be included in the determination of excess emissions.
- 12. Monitoring Requirement On and after April 17, 2006, the permittee shall monitor the following whenever the LVHC or HVLC systems are operating:
  - 12.a. All periods in which any equipment included in the LVHC and HVLC systems is operating shall be recorded.

- 12.b. All periods in which a Startup, Shutdown or Malfunction of the control device(s) is occurring shall be recorded;
  - 12.c. All periods in which a control device is not in use shall be recorded;
  - 12.d. All periods in which a control device is in use but is functioning outside the required parameter range shall be recorded; and
  - 12.e. All periods of bypassing from the LVHC or HVLC main vent valve(s).
    - 12.e.i. Bypassing shall be monitored at least once every 15 minutes by use of a flow indicating device installed in each bypass line, or by use of any indicating device(s) that provide(s) a positive indication of bypassing. [40 CFR 63.450(d)]
    - 12.e.ii. The duration of the use of bypass valves on computer controlled valves. [40 CFR 63.454(b)(12)]
- (Note: Monitoring of manually controlled valves is addressed in the Closed Vent System monitoring.)
- 12.f. Recordkeeping The permittee shall maintain records of the information specified in this Condition.
    - 12.f.i. The total operating time of the pulping system during each semi-annual period, calculated as the total of all periods in which any part(s) of the LVHC or HVLC systems were operating [40 CFR 63.10(c)(13)].
    - 12.f.ii. The date, time and duration of all periods in which a control device was not in use.
    - 12.f.iii. The date, time and duration of all periods in which a control device was in use but was functioning outside the required parameter range.
    - 12.f.iv. The date, time and duration of all periods of bypassing from the LVHC or HVLC main vent valve(s). [40 CFR 63.454(b)]

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- 12.f.v. the occurrence and duration of each startup, shutdown or malfunction [40 CFR 63.10(b)(2)(i)];
- 12.f.vi. the occurrence and duration of each malfunction of air pollution control equipment [40 CFR 63.10(b)(2)(ii)];
- 12.f.vii. all major maintenance performed on the air pollution control equipment [40 CFR 63.10(b)(2)(iii)].
- 12.f.viii. actions taken during periods of startup, shutdown or malfunction when such actions are different from procedures specified in the SSM plan [40 CFR 63.10(b)(2)(iv)];
- 12.f.ix. actions taken during periods of startup, shutdown or malfunction when such actions are consistent with procedures specified in the SSM plan [40 CFR 63.10(b)(2)(v)].
- 12.f.x. the date and time of commencement and completion of each period of excess emissions and parameter monitoring exceedences that occur during startup, shutdown or malfunction of the affected source [40 CFR 63.10(c)(7)];

- 12.f.xi. the date and time of commencement and completion of each period of excess emissions and parameter monitoring exceedences that occurs during periods other than startup, shutdown or malfunction of the affected source [40 CFR 63.10(c)(8)];
- 12.f.xii. the nature and cause of any malfunction (if known) [40 CFR 63.10(c)(10)];
- 12.f.xiii. the corrective action taken or preventive measures adopted [40 CFR 63.10(c)(11)].
- 12.f.xiv. each period in which a CMS is malfunctioning or inoperative (including out of control periods) [40 CFR 63.10(b)(2)(vi)];
- 12.f.xv. all required measurements needed to demonstrate compliance with a relevant standard, as required in the relevant monitoring Condition(s) [40 CFR 63.10(b)(2)(vii)];
- 12.f.xvi. all measurements as may be necessary to determine the conditions of performance tests and performance evaluations, as required in the relevant monitoring Condition(s) [40 CFR 63.10(b)(2)(ix)];
- 12.f.xvii. all CMS calibration checks [40 CFR 63.10(b)(2)(x)];
- 12.f.xviii. all adjustments and maintenance performed on CMS [40 CFR 63.10(b)(2)(xi)];
- 12.f.xix. all required CMS measurements [40 CFR 63.10(c)(1)];
- 12.f.xx. the date and time identifying each period during which the CMS was inoperative except for zero (low-level) and high-level checks [40 CFR 63.10(c)(5)];
- 12.f.xxi. the nature of the repairs or adjustments to the CMS that was inoperative or out of control [40 CFR 63.10(c)(12)];

#### Thermal Oxidizer for LVHC and HVLC Systems

- 13. **Applicable Requirement** Each thermal oxidizer used to comply with Conditions 9.c.i or 11.d.ii shall reduce the total HAP concentration to 20 ppm by volume or less, corrected to 10 percent oxygen. The operating requirements in this Condition apply only during periods when the thermal oxidizer is being used to comply with Condition 9.c.i or 11.d.ii. [40 CFR 63.443(d)(2)];
- 14. **Monitoring Requirement** The permittee shall conduct source tests of the thermal oxidizer gas effluent in accordance with the following:
  - 14.a. Source tests shall be conducted on the following schedule:
    - 14.a.i. The permittee shall conduct at least one source test per calendar year at approximately 12 month intervals.
    - 14.a.ii. During the year 2006, the source test shall be conducted after connecting the HVLC system to the thermal oxidizer, but not later than October 13, 2006.
  - 14.b. The source tests shall determine the concentration of methanol and oxygen at the outlet of the thermal oxidizer; the outlet methanol concentration shall be corrected to 10 percent oxygen.
  - 14.c. During the source tests the pulp production rate (ADUT) shall be at least 90 percent of the previous calendar year's average annual rate, unless otherwise specified in the source test plan and approved by the Department.

- 14.d. The CMS's required in Condition 16 shall be operated during the source test and the CMS output shall be monitored.
- 14.e. The source tests shall follow the procedures in Condition 44, unless otherwise approved in writing by the Department.
- 14.f. Recordkeeping The permittee shall retain the following records of each source test and make them available upon request:
  - 14.f.i. source test results;
  - 14.f.ii. CMS outputs during the source test;
  - 14.f.iii. the previous calendar year's annual average pulp production rate (ADUT); and
  - 14.f.iv. the pulp production rate (ADUT) during the source test.

- 15. Applicable Requirement The permittee shall operate the thermal oxidizer within the parameter range established in accordance with this condition as a 1-hour/3-hour block average. [40 CFR 63.443(d)(2) and 40 CFR 63.453(n)]

Establishing and Changing Operating Parameters

- 15.a. The permittee shall establish an operating parameter range for the thermal oxidizer in accordance with Condition 15.d.
- 15.b. Not later than October 13, 2006, the permittee shall establish or re-establish an operating parameter range for the thermal oxidizer in accordance with Condition 15.d.
- 15.c. The permittee may voluntarily re-establish the operating parameter range for the thermal oxidizer by following the procedure in Condition 15.d. The revised operating parameter range will be effective retroactively from the date of the source test used to establish the operating parameter range.
- 15.d. The operating parameter range shall be established or re-established as follows:
  - 15.d.i. The operating parameter range shall be not less than the lowest 1-hour/3-hour average combustion chamber temperature monitored during a relevant source test that returned a compliant result.
    - 15.d.i.(1) If compliance and monitoring are based on 1-hour block averages, then 1-hour source test runs that returned a non-compliant result, even if the average of the runs showed compliance, may not be used to expand the parameter range.
    - 15.d.i.(2) If compliance and monitoring are based on 3-hour block averages, then 1-hour source test runs that returned a non-compliant result may be used to expand the parameter range, provided that the average of the test runs showed compliance.
  - 15.d.ii. Relevant source tests include:
    - 15.d.ii.(1) all performance and/or source tests required by this permit, and
    - 15.d.ii.(2) all voluntary source tests conducted at any time that substantially comply with the source testing requirements in this permit, provided that the permittee can demonstrate to the Department's satisfaction that the source test(s) were conducted during representative source operation.

- 15.d.iii. Operating parameter ranges established with only the LVHC system connected to the thermal oxidizer are invalid after the initial performance test with the HVLC system connected is performed.

16. **Monitoring Requirement** The permittee shall install, calibrate, certify, operate, and maintain according to the manufacturer's specifications, a CMS to measure the combustion temperature for each thermal oxidizer used to comply with Condition 9.c.i or 11.d.ii. [40 CFR 63.453(b)]

- 16.a. The CMS shall be installed, operational and the data verified either prior to or in conjunction with conducting the initial performance test. [40 CFR 63.8(c)(3)]
- 16.b. Temperature shall be monitored during all periods when the thermal oxidizer is being used to comply with Conditions 9.c.i or 11.d.ii.
- 16.c. Temperature shall be monitored in the firebox or in the ductwork immediately downstream of the firebox and before any substantial heat exchange occurs. [40 CFR 63.453(b)]
- 16.d. Temperature data shall be reduced to a 1-hour/3-hour block average. A one hour period means any 60 minute period commencing on the hour.
- 16.e. The CMS shall include a continuous recorder. [40 CFR 63.453(d)]
- 16.f. **Recordkeeping** The permittee shall record the following:
- 16.f.i. Each value of the 1-hour/3-hour block average temperature.
- 16.f.ii. The operating parameter range, and the date on which the operating parameter range was established or re-established.

**Subpart A recordkeeping**

- 16.f.iii. the occurrence and duration of each startup, shutdown or malfunction [40 CFR 63.10(b)(2)(i)];
- 16.f.iv. the occurrence and duration of each malfunction of air pollution control equipment [40 CFR 63.10(b)(2)(ii)];
- 16.f.v. all major maintenance performed on the air pollution control equipment [40 CFR 63.10(b)(2)(iii)].
- 16.f.vi. actions taken during periods of startup, shutdown or malfunction when such actions are different from procedures specified in the SSM plan [40 CFR 63.10(b)(2)(iv)];
- 16.f.vii. actions taken during periods of startup, shutdown or malfunction when such actions are consistent with procedures specified in the SSM plan [40 CFR 63.10(b)(2)(v)].
- 16.f.viii. the date and time of commencement and completion of each period of excess emissions and parameter monitoring exceedences that occur during startup, shutdown or malfunction of the affected source [40 CFR 63.10(c)(7)];
- 16.f.ix. the date and time of commencement and completion of each period of excess emissions and parameter monitoring exceedences that occurs during periods other than startup, shutdown or malfunction of the affected source [40 CFR 63.10(c)(8)];

- 16.f.x. the nature and cause of any malfunction (if known) [40 CFR 63.10(c)(10)];
- 16.f.xi. the corrective action taken or preventive measures adopted [40 CFR 63.10(c)(11)];
- 16.f.xii. each period in which a CMS is malfunctioning or inoperative (including out of control periods) [40 CFR 63.10(b)(2)(vi)];
- 16.f.xiii. all required measurements needed to demonstrate compliance with a relevant standard, as required in the relevant monitoring Condition(s) [40 CFR 63.10(b)(2)(vii)];
- 16.f.xiv. all measurements as may be necessary to determine the conditions of performance tests and performance evaluations, as required in the relevant monitoring Condition(s) [40 CFR 63.10(b)(2)(ix)];
- 16.f.xv. all CMS calibration checks [40 CFR 63.10(b)(2)(x)];
- 16.f.xvi. all adjustments and maintenance performed on CMS [40 CFR 63.10(b)(2)(xi)];
- 16.f.xvii. all required CMS measurements [40 CFR 63.10(c)(1)];
- 16.f.xviii. the date and time identifying each period during which the CMS was inoperative except for zero (low-level) and high-level checks [40 CFR 63.10(c)(5)];
- 16.f.xix. the nature of the repairs or adjustments to the CMS that was inoperative or out of control [40 CFR 63.10(c)(12)];

## **BLEACHING SYSTEM REQUIREMENTS**

### **Summary of requirements**

Applicable Requirement	Condition Number	Pollutant/Parameter	Limit/Standard	Averaging Time	Testing Condition	Monitoring Condition
40 CFR 63.440(d)	18	Chlorine	Capture and control bleach plant HAPs	n/a	n/a	19
40 CFR 63.445(c)(2)	20	Chlorine	See Condition 20	1-hour	n/a	23
	22	Scrubber parameter ranges	See Condition 22	1 hour		
40 CFR 63.445(d)(2)	24	Hypochlorite or chlorine	See Condition 24	n/a	n/a	25

- 17. The bleach plant equipment that is subject to the 40 CFR Part 63, Subpart S requirements in this permit is specified in the SSM plan which incorporated by reference. [40 CFR Part 63, Subpart S]
- 18. **Applicable Requirement** Each bleaching stage where chlorinated bleaching compounds are introduced shall be enclosed and vented into a closed-vent system and routed to a control device. [40 CFR 63.440(d) and 40 CFR 63.445(b)]
  - 18.a. The enclosures and closed-vent system shall meet the requirements specified in Condition 37.
  - 18.b. The control device shall meet the requirements specified in Condition 20.

19. **Monitoring Requirement** The permittee shall monitor computer controlled bypass valves and periods of bypassing from the bleaching system closed vent system as follows:
- 19.a. The position(s) of computer controlled bypass valve(s) shall be monitored at least once every 15 minutes.
  - 19.b. Bypassing shall be monitored at least once every 15 minutes by use of a flow monitoring device installed in each bypass line, or by use of any monitoring device(s) that provide(s) a positive indication of bypassing. [40 CFR 63.450(d)(1)]  
(Note: Monitoring of manually controlled valves is addressed in the Closed Vent System monitoring.)
  - 19.c. **Recordkeeping** The permittee shall record the duration of the use of bypass valves on computer controlled valves associated with the bleaching system closed vent system at all times when the bleach plant is operating. [40 CFR 63.454(b)]

**Subpart A recordkeeping**

- 19.c.i. the occurrence and duration of each startup, shutdown or malfunction [40 CFR 63.10(b)(2)(i)];
- 19.c.ii. the occurrence and duration of each malfunction of air pollution control equipment [40 CFR 63.10(b)(2)(ii)];
- 19.c.iii. all major maintenance performed on the air pollution control equipment [40 CFR 63.10(b)(2)(iii)].
- 19.c.iv. actions taken during periods of startup, shutdown or malfunction when such actions are different from procedures specified in the SSM plan [40 CFR 63.10(b)(2)(iv)];
- 19.c.v. actions taken during periods of startup, shutdown or malfunction when such actions are consistent with procedures specified in the SSM plan [40 CFR 63.10(b)(2)(v)].
- 19.c.vi. the date and time of commencement and completion of each period of excess emissions and parameter monitoring exceedences that occur during startup, shutdown or malfunction of the affected source [40 CFR 63.10(c)(7)];
- 19.c.vii. the date and time of commencement and completion of each period of excess emissions and parameter monitoring exceedences that occurs during periods other than startup, shutdown or malfunction of the affected source [40 CFR 63.10(c)(8)];
- 19.c.viii. the nature and cause of any malfunction (if known) [40 CFR 63.10(c)(10)];
- 19.c.ix. the corrective action taken or preventive measures adopted [40 CFR 63.10(c)(11)].
- 19.c.x. each period in which a CMS is malfunctioning or inoperative (including out of control periods) [40 CFR 63.10(b)(2)(vi)];
- 19.c.xi. all required measurements needed to demonstrate compliance with a relevant standard, as required in the relevant monitoring Condition(s) [40 CFR 63.10(b)(2)(vii)];
- 19.c.xii. all measurements as may be necessary to determine the conditions of performance tests and performance evaluations, as required in the relevant monitoring Condition(s) [40 CFR 63.10(b)(2)(ix)];
- 19.c.xiii. all CMS calibration checks [40 CFR 63.10(b)(2)(x)];

- 19.c.xiv. all adjustments and maintenance performed on CMS [40 CFR 63.10(b)(2)(xi)];
  - 19.c.xv. all required CMS measurements [40 CFR 63.10(c)(1)];
  - 19.c.xvi. the date and time identifying each period during which the CMS was inoperative except for zero (low-level) and high-level checks [40 CFR 63.10(c)(5)];
  - 19.c.xvii. the nature of the repairs or adjustments to the CMS that was inoperative or out of control [40 CFR 63.10(c)(12)];
20. Applicable Requirement The control device(s) used to reduce total HAP emissions from each bleaching stage where chlorinated bleaching compounds are introduced shall achieve a treatment device outlet concentration of 10 ppm or less by volume of total chlorinated HAP, measured as chlorine [40 CFR 63.445(c)(2)]
21. Monitoring Requirement The permittee shall conduct source tests of each bleach plant scrubber gas effluent in accordance with the following:
- 21.a. The permittee shall conduct at least one source test per calendar year at approximately 12 month intervals.
  - 21.b. The source tests shall be for chlorine, using Method 26A or other method approved by EPA.;
  - 21.c. The CMS's required in Condition 23 shall be operated during the source test and the CMS outputs shall be monitored.
  - 21.d. The source tests shall follow the procedures in Condition 44, unless otherwise approved in writing by the Department.
  - 21.e. The permittee shall retain source test results and the CMS outputs during the source test and make them available upon request.
22. Applicable Requirement The permittee shall operate the bleach plant scrubber(s) within the parameter ranges established in accordance with this Condition, as a 1-hour/3-hour block average. [40 CFR 63.445(c) and 40 CFR 63.453(n)]

Establishing and Changing Operating Parameters

- 22.a. The permittee shall establish operating parameter ranges for the bleach plant scrubber(s) in accordance with Condition 22.c.
- 22.b. The permittee may voluntarily re-establish the operating parameter range for the bleach plant scrubber by following the procedure in Condition 22.c. The revised operating parameter range will be effective retroactively from the date of the source test used to establish the operating parameter range.
- 22.c. The operating parameter ranges shall be established or re-established as follows:
  - 22.c.i. The operating parameter ranges shall be established from parameter monitoring results obtained during source tests that return compliant results, and shall conform with the following:
    - 22.c.i.(1) The scrubber liquid effluent:
      - 22.c.i.(1)(a) pH shall not be lower than the lowest scrubber effluent pH monitored during a source test, as a 1-hour/3-hour average; or

- 22.c.i.(1)(b) ORP shall not be higher than the highest effluent ORP monitored during a source test, as a 1-hour/3-hour average.
- 22.c.i.(2) The scrubber fan motor shall be operating.
- 22.c.i.(3) The gas scrubber influent liquid flow rate shall not be lower than the lowest flow rate monitored during a source test, as a 1-hour/3-hour average.
- 22.c.ii. If compliance and monitoring are based on 1-hour block averages, then 1-hour source test runs that returned a non-compliant result, even if the average of the runs showed compliance, may not be used to expand the parameter range.
- 22.c.iii. If compliance and monitoring are based on 3-hour block averages, then 1-hour source test runs that returned a non-compliant result may be used to expand the parameter range, provided that the average of the test runs showed compliance.
- 22.c.iv. Relevant source tests include:
  - 22.c.iv.(1) all performance and/or source tests required by this permit, and
  - 22.c.iv.(2) all voluntary source tests conducted at any time that substantially comply with the source testing requirements in this permit, provided that the permittee can demonstrate to the Department's satisfaction that the source test(s) were conducted during representative source operation.
- 23. Monitoring Requirement The permittee shall install, calibrate, certify, operate, and maintain according to the manufacturer's specifications, a CMS to measure gas scrubber operating parameters as specified below: [40 CFR 63.453(c)]
  - 23.a. The CMS shall be installed, operational and the data verified either prior to or in conjunction with conducting the initial performance test. [40 CFR 63.8(c)(3)]
  - 23.b. Each of the following parameters shall be monitored:
    - 23.b.i. The pH or oxidation/reduction potential (ORP) of the scrubber effluent.
    - 23.b.ii. The gas scrubber vent gas inlet flow rate, or one of the following surrogates for gas inlet flow rate: scrubber fan motor amperage or scrubber fan motor rotational speed.
    - 23.b.iii. The gas scrubber influent liquid flow rate.
  - 23.c. Parameter monitoring data shall be reduced to a 1-hour/3-hour block average. A one hour period means any 60 minute period commencing on the hour.
  - 23.d. The CMS shall include a continuous recorder. [40 CFR 63.453(d)]
  - 23.e. Recordkeeping The permittee shall record the following:
    - 23.e.i. Each 1-hour/3-hour block average parameter reading.
    - 23.e.ii. All periods of operation outside of allowed parameter ranges.
    - 23.e.iii. Operating parameter ranges and the dates on which the ranges were established.
- Subpart A recordkeeping
  - 23.e.iv. the occurrence and duration of each startup, shutdown or malfunction [40 CFR 63.10(b)(2)(i)];

- 23.e.v. the occurrence and duration of each malfunction of air pollution control equipment [40 CFR 63.10(b)(2)(ii)];
- 23.e.vi. all major maintenance performed on the air pollution control equipment [40 CFR 63.10(b)(2)(iii)];
- 23.e.vii. actions taken during periods of startup, shutdown or malfunction when such actions are different from procedures specified in the SSM plan [40 CFR 63.10(b)(2)(iv)];
- 23.e.viii. actions taken during periods of startup, shutdown or malfunction when such actions are consistent with procedures specified in the SSM plan [40 CFR 63.10(b)(2)(v)].
  
- 23.e.ix. the date and time of commencement and completion of each period of excess emissions and parameter monitoring exceedences that occur during startup, shutdown or malfunction of the affected source [40 CFR 63.10(c)(7)];
- 23.e.x. the date and time of commencement and completion of each period of excess emissions and parameter monitoring exceedences that occurs during periods other than startup, shutdown or malfunction of the affected source [40 CFR 63.10(c)(8)];
- 23.e.xi. the nature and cause of any malfunction (if known) [40 CFR 63.10(c)(10)];
- 23.e.xii. the corrective action taken or preventive measures adopted [40 CFR 63.10(c)(11)];
- 23.e.xiii. each period in which a CMS is malfunctioning or inoperative (including out of control periods) [40 CFR 63.10(b)(2)(vi)];
- 23.e.xiv. all required measurements needed to demonstrate compliance with a relevant standard, as required in the relevant monitoring Condition(s) [40 CFR 63.10(b)(2)(vii)];
- 23.e.xv. all measurements as may be necessary to determine the conditions of performance tests and performance evaluations, as required in the relevant monitoring Condition(s) [40 CFR 63.10(b)(2)(ix)];
- 23.e.xvi. all CMS calibration checks [40 CFR 63.10(b)(2)(x)];
- 23.e.xvii. all adjustments and maintenance performed on CMS [40 CFR 63.10(b)(2)(xi)];
- 23.e.xviii. all required CMS measurements [40 CFR 63.10(c)(1)];
- 23.e.xix. the date and time identifying each period during which the CMS was inoperative except for zero (low-level) and high-level checks [40 CFR 63.10(c)(5)];
- 23.e.xx. the nature of the repairs or adjustments to the CMS that was inoperative or out of control [40 CFR 63.10(c)(12)];
  
- 24. Applicable Requirement The permittee shall introduce no hypochlorite or chlorine for bleaching into the bleaching system. The presence of small amounts of hypochlorite or chlorine that are by-products or residues of chlorine dioxide production or use shall not constitute a violation of this Condition. [40 CFR 63.440(d) & 40 CFR 63.445(d)(2)]
  
- 25. Monitoring Requirement By April 30, 2001, the permittee shall have submitted certification that no hypochlorite or chlorine, other than small amounts of hypochlorite or chlorine that are by-products or residues of chlorine dioxide production, will be introduced into the bleaching system. The permittee shall retain a copy of the certification and make it available upon request.

## PULPING CONDENSATES REQUIREMENTS

### Summary of requirements

Applicable Requirement	Condition Number	Pollutant/Parameter	Limit/Standard	Averaging Time	Testing Condition	Monitoring Condition
40 CFR 63.440(d)	28	Pulping condensate collection requirements	See Condition 28	60 days	33	29, 30, 31
40 CFR 63.446(e)(3)	32	Pulping condensates treatment requirements	See Condition 32			
40 CFR 63.453(p)	35	Treatment system parameter out-of-range requirements	See Condition 35			36

26. The mill-specific pulping condensate streams that are subject to the 40 CFR Part 63, Subpart S requirements in this permit are specified in the SSM plan which is incorporated by reference. [40 CFR Part 63, Subpart S]
- 26.a. If alternate operating scenarios are listed, the permittee may choose which scenario to operate under at any given time, and may switch scenarios at any time, subject to the following:
- 26.b. Prior to operating under an alternate scenario other than the initial scenario in effect when compliance with the standard is required, the permittee shall determine the emission factor(s) for any condensate stream(s) not previously characterized.
- 26.b.i. The emission factor determination shall follow the ICCS procedure in Condition 29.
- 26.b.ii. The emission factor(s) shall be determined or verified not more than one year prior to the date on which operation under the alternate scenario is begun. Verification shall follow the procedures in Condition 31.
27. The averaging period for determining compliance with the condensate collection and treatment requirements in this permit is 60 days. [40 CFR Part 63, Subpart S]
28. Applicable Requirement The permittee shall comply with the following requirements for pulping system condensate collection and treatment. [40 CFR 63.440(d)]
- 28.a. The pulping process condensates from the following equipment systems shall be collected as specified in this Condition and treated to meet the requirements specified in Condition 32. The condensate streams listed in this Condition are defined as "named streams" in Condition 1 of this permit. [40 CFR 63.446(b)]:
- 28.a.i. Each digester system;
- 28.a.ii. Each turpentine recovery system;

- 28.a.iii. Each evaporator system condensate from:
  - 28.a.iii.(1) The vapors from each stage where weak liquor is introduced (feed stages); and
  - 28.a.iii.(2) Each evaporator vacuum system for each stage where weak liquor is introduced (feed stages).
- 28.a.iv. Each HVLC collection system; and
- 28.a.v. Each LVHC collection system.
  
- 28.b. The pulping process condensates from equipment systems listed in paragraphs (a)(i) through (a)(v) of this section that in total contain a total HAP mass of 3.6 kilograms or more of total HAP per megagram (7.2 pounds per ton) of ODP for mills that do not perform bleaching or 5.5 kilograms or more of total HAP per megagram (11.1 pounds per ton) of ODP for mills that perform bleaching shall be subject to the requirements of paragraphs (c.) and (d.) of this Condition: [40 CFR 63.446(c)]
  
- 28.c. The pulping process condensates shall be conveyed in a closed collection system that is designed and operated to meet the following requirements: [40 CFR 63.446(d)]
  - 28.c.i. The individual drain system requirements specified in Condition 41;
  - 28.c.ii. Control devices shall be designed and operated in accordance with Conditions 9.c and 11.d (i.e., the thermal oxidizer and lime kiln requirements);
  - 28.c.iii. Closed vent systems shall be designed and operated in accordance with Condition 37.
  - 28.c.iv. Condensate storage tanks shall be designed and operated in accordance with Condition 38.
  - 28.c.v. The pulping process condensates shall be discharged below the liquid surface of a biological treatment system to reduce or destroy the total HAPs by 92 percent or more by weight.
  
- 29. Monitoring Requirement - ICCS Procedure - The permittee shall demonstrate compliance with the pulping condensate collection requirement by completing an Initial Condensate Characterization Study (ICCS) using the procedures and calculations specified in this Condition. The terms "named streams" and "other streams" are defined in Condition 1. [40 CFR 63.453(i) and 40 CFR 63.7]
  - 29.a. For source tests other than the initial performance (source) test required by October 12, 2001, the results of the source test shall be submitted not more 30 days following completion of the source test. The source test is considered complete upon receipt of all sample results. [40 CFR 63.10(d)(2)]
  - 29.b. The permittee may elect to combine all or part of the named streams into one or more combined streams, and to monitor the combined stream(s) in lieu of monitoring each individual named stream, subject to the follow restrictions:
    - 29.b.i. the permittee may not combine named streams and other streams prior to the monitoring and sampling location(s); and
    - 29.b.ii. any named streams that are combined for monitoring purposes must be collected and combined at all times except for periods of startup, shutdown or malfunction.

29.c. The permittee shall perform the following sampling and monitoring on all or part of the named streams for at least 15 consecutive operating days:

- 29.c.i. During the selected ICCS (sampling) period, the permittee shall collect samples on at least 25 percent of the days in the sampling period (rounded up to the next whole day). Sampling days shall be spread throughout the sampling period in a random fashion.
- 29.c.ii. Sampling shall be done as follows: [ 40 CFR 63.457(c)(3)]
  - 29.c.ii.(1) At least 3 sampling runs shall be made each sampling day at each sampling point;
  - 29.c.ii.(2) Each sampling run shall be for a minimum of a one hour period;
  - 29.c.ii.(3) Samples may be taken continuously or by taking multiple grab samples. If multiple grab samples are taken, they must be taken at approximately equal intervals over the sampling run; and
  - 29.c.ii.(4) The results of the sampling runs shall be averaged or the samples may be composited for each sampling day at each sampling point.
  - 29.c.ii.(5) The daily composite sample shall be analyzed for methanol using EPA Method 305, NCASI DI/MeOH 94.02, or other method approved by EPA.
- 29.c.iii. The volume collected of each sampled stream shall be monitored using a flow meter every day for the entire ICCS period.
- 29.c.iv. The amount of pulp produced shall be monitored every day for the entire ICCS period, as ODTP.

29.d. The permittee shall perform the following calculations\*:

(\* Notes: Calculations are described in general terms only; use of appropriate units and conversion factors is assumed. Metric units may be substituted for English units.)

- 29.d.i. For each collected stream, determine the daily average concentration of methanol from the daily composite sample.
- 29.d.ii. For each collected stream, calculate the arithmetic average and the standard deviation of the daily concentration of methanol over the ICCS period. The average concentration value is the emission factor (EF) for each stream.
- 29.d.iii. For each collected stream, calculate the daily pounds of methanol collected as the emission factor (EF) times the daily volume collected.
- 29.d.iv. For each collected stream, calculate the total methanol collected by summing the daily pounds of methanol collected over the ICCS period.
- 29.d.v. Calculate the total pounds of methanol collected during the ICCS by summing the total methanol collected for each stream over the number of streams collected.
- 29.d.vi. Calculate the total pulp production during the ICCS by summing up the daily pulp production.
- 29.d.vii. Calculate the amount of methanol collected per ODTP by dividing the total methanol collected during the ICCS by the total pulp production during the ICCS.
- 29.d.viii. Provided that the ICCS demonstrates compliance with Condition 28, the permittee shall select an initial condensate collection compliance averaging period of P days, with P not to exceed the number of days in the ICCS sampling period, or 60 days, whichever is less. If the initial averaging period exceeds 30 days, the permittee shall also comply with Condition 29g.

- 29.e. If the permittee wishes to collect and treat "other streams", the procedure described above shall be used to determine the emission factor(s).
- 29.f. The initial emission factors and averaging period shall be used retroactively from the end of the ICCS period.

Establishing and changing emission factors and/or P

- 29.g. If the initial condensate collection averaging period P is greater than 30 days, the permittee shall submit a permit modification request to the Department not later than 14 months after beginning the daily monitoring required by Condition 30. The permit modification request shall include the following:
  - 29.g.i. A request to establish a condensate collection averaging period P that does not exceed 30 days; or
  - 29.g.ii. A request to continue the previous condensate collection averaging period, or establish a different condensate collection averaging period P that is greater than 30 days, but not greater than 60 days. The request shall include sufficient condensate sample results to demonstrate that condensate collection variability is not due to undercollection. The report shall include monitoring information over a period of at least 12 months, and an analysis of the data to support the permittee's requested averaging period.
  - 29.g.iii. The new condensate collection averaging period, P, becomes effective upon issuance of a permit modification.
- 29.h. The permittee may change the condensate collection and treatment averaging period, P, using the following procedure:
  - 29.h.i. Submit a permit modification request to revise the condensate collection and treatment averaging period, P in Condition 27;
  - 29.h.ii. If the permittee is requesting a condensate collection averaging period that is greater than 30 days, the request shall include sufficient condensate sample results to demonstrate that condensate collection variability is not due to undercollection. The report shall include monitoring information over a period of at least 12 months, and an analysis of the data to support the permittee's requested averaging period. The averaging period shall not exceed 60 days.
  - 29.h.iii. The new condensate collection averaging period, P, becomes effective upon issuance of a permit modification.
- 29.i. In the event that a process change is made that requires submittal of a construction notice (e., a Notice of Approval application or construction permit application), and that would reasonably be expected to alter the methanol concentration of any collected stream(s), the permittee shall establish a new emission factor for each affected stream and demonstrate compliance with Condition 28 by doing the following:
  - 29.i.i. Not less than 14 working days after completing the process change, the permittee shall submit an ICCS retest proposal. The retest proposal shall:
    - 29.i.i.(1) describe the process change;
    - 29.i.i.(2) identify the stream(s) to be retested;
    - 29.i.i.(3) shall propose the start date for the retest; and
    - 29.i.i.(4) may allow for a reasonable period of time for the process change to stabilize before the retest.

- 29.i.ii. Approval of the retest proposal is not required; however, the Department may request additional information up to 5 working days before the proposed start date of the retest.
- 29.i.iii. The retest shall follow the ICCS procedure (Condition 30) on the affected stream or streams. The retest period shall be P days (the condensate collection averaging period) as specified in Condition 27.
- 29.i.iv. Upon completion of the retest, the permittee shall submit a report demonstrating that the permittee is in compliance with Condition 28.
- 29.i.v. In the event that the new emission factor(s) is/are statistically different from the previous emission factor(s) as determined using the procedure in Condition 46, the permittee shall:
  - 29.i.v.(1) record the new emission factor(s); and
  - 29.i.v.(2) use the new emission factor(s) retroactively from the beginning of the retest period to show compliance.
- 29.j. The permittee may voluntarily establish a new emission factor or reestablish an existing emission factor for any condensate stream or streams using the following procedure:
  - 29.j.i. Perform a retest following the ICCS procedure on the affected stream or streams. The retest period shall be P days (the condensate collection averaging period) as specified in Condition 27.
  - 29.j.ii. record the new emission factor(s); and
  - 29.j.iii. use the new emission factor(s) retroactively from the beginning of the retest period to show compliance.
- 29.k. The permittee may adjust any or all emission factors using verification data and the following procedure:
  - 29.k.i. Data obtained during verification testing may be combined with the data used to determine the current emission factor, provided that all verification data obtained since the most recent ICCS procedure be used (i.e., data may not be selectively omitted);
  - 29.k.ii. record the new emission factor(s); and
  - 29.k.iii. use the new emission factor(s) retroactively from the beginning of the most recent verification test to show compliance.
- 30. Monitoring Requirement The permittee shall demonstrate compliance with the pulping condensate collection requirements by performing the following monitoring each day: (NOTE: Metric units may be substituted for English units.) [40 CFR 63.453(i)]
  - 30.a. Monitor daily pulp production.
  - 30.b. Monitor the volume collected each day from each named stream specified in Condition 26 using a flow meter.
  - 30.c. For each collected stream, calculate the daily pounds of methanol collected as the methanol emission factor (EF) times the volume collected from each stream.
  - 30.d. For each collected stream, calculate the total methanol collected during the preceding P days by summing the daily pounds of methanol collected over that period. P is the condensate collection averaging period in Condition 27.

- 30.e. Calculate the total pounds of methanol collected from named streams during the preceding P day period by summing the total methanol collected from each named stream during that period over the number of named streams collected.
- 30.f. Calculate the total pulp production during the preceding P days by summing up the daily pulp production over that period.
- 30.g. Calculate the amount of methanol collected per ODTP by dividing the total methanol collected during the preceding P days by the total pulp production during the same period.

30.h. Recordkeeping The permittee shall maintain the following records:

- 30.h.i. The condensate stream emission factors and standard deviations, and the dates on which the emission factors became effective.

Daily recordkeeping

- 30.h.ii. Daily pulp production.
- 30.h.iii. The volume collected each day from each named stream.
- 30.h.iv. For each named stream, record the daily pounds of methanol collected.
- 30.h.v. For each named stream, record the total methanol collected over the proceeding 60 day period.
- 30.h.vi. Record the total pounds of methanol collected during the proceeding 60 day period.
- 30.h.vii. Record the total pulp production during the proceeding 60 day period.
- 30.h.viii. Record the amount of methanol collected per ODTP.

Subpart A recordkeeping

- 30.h.ix. the occurrence and duration of each startup, shutdown or malfunction [40 CFR 63.10(b)(2)(i)];
- 30.h.x. the occurrence and duration of each malfunction of air pollution control equipment [40 CFR 63.10(b)(2)(ii)];
- 30.h.xi. all major maintenance performed on the air pollution control equipment [40 CFR 63.10(b)(2)(iii)].
- 30.h.xii. actions taken during periods of startup, shutdown or malfunction when such actions are different from procedures specified in the SSM plan [40 CFR 63.10(b)(2)(iv)];
- 30.h.xiii. actions taken during periods of startup, shutdown or malfunction when such actions are consistent with procedures specified in the SSM plan [40 CFR 63.10(b)(2)(v)].
- 30.h.xiv. the date and time of commencement and completion of each period of excess emissions and parameter monitoring exceedences that occur during startup, shutdown or malfunction of the affected source [40 CFR 63.10(c)(7)];
- 30.h.xv. the date and time of commencement and completion of each period of excess emissions and parameter monitoring exceedences that occurs during periods other than startup, shutdown or malfunction of the affected source [40 CFR 63.10(c)(8)];

- 30.h.xvi. the nature and cause of any malfunction (if known) [40 CFR 63.10(c)(10)];
- 30.h.xvii. the corrective action taken or preventive measures adopted [40 CFR 63.10(c)(11)];
- 30.h.xviii. each period in which a CMS is malfunctioning or inoperative (including out of control periods) [40 CFR 63.10(b)(2)(vi)];
- 30.h.xix. all required measurements needed to demonstrate compliance with a relevant standard, as required in the relevant monitoring Condition(s) [40 CFR 63.10(b)(2)(vii)];
- 30.h.xx. all measurements as may be necessary to determine the conditions of performance tests and performance evaluations, as required in the relevant monitoring Condition(s) [40 CFR 63.10(b)(2)(ix)];
- 30.h.xxi. all CMS calibration checks [40 CFR 63.10(b)(2)(x)];
- 30.h.xxii. all adjustments and maintenance performed on CMS [40 CFR 63.10(b)(2)(xi)];
- 30.h.xxiii. all required CMS measurements [40 CFR 63.10(c)(1)];
- 30.h.xxiv. the date and time identifying each period during which the CMS was inoperative except for zero (low-level) and high-level checks [40 CFR 63.10(c)(5)];
- 30.h.xxv. the nature of the repairs or adjustments to the CMS that was inoperative or out of control [40 CFR 63.10(c)(12)];

### 31. Monitoring Requirement

- 31.a. Following completion of the ICCS, the permittee shall periodically validate the condensate stream emission factors (EFI) as required in this Condition.
- 31.b. The validation frequency shall be determined for each calendar year as follows:
  - 31.b.i. Not later than January 15 of each year, the permittee shall calculate the value of "d", using the procedure in Condition 45.
  - 31.b.ii. The test frequency for that year shall be determined from the table below:

Value of "d"	Confidence	Number of tests	Validation frequency
Less than 1.00	<84.1%	4	Once each calendar quarter
1.00 to 1.99	84.1-97.7%	2	Once in 1 <sup>st</sup> and 3 <sup>rd</sup> calendar quarter
2.00 to 2.33	97.7-99.0%	1	Once in 1 <sup>st</sup> calendar quarter
Greater than 2.33	>99.0%	0 *	None required that year

\* In the event that the permittee calculates a value of "d" greater than 2.33 for five consecutive calendar years, at least one validation test shall be conducted within that five year period. Counting begins immediately after the last verification test or ICCS procedure.

- 31.c. The validation sampling period shall begin within the first 20 days of a calendar quarter (i.e., during the periods January 1 – 20; April 1-20; July 1-20; and/or October 1-20). The sampling procedures required in this Condition, including any of the test extensions that may be required below, must be completed within two calendar quarters.
- 31.d. The permittee shall perform the following monitoring on all of the currently collected condensate streams (both "named" and "other") over a sampling period of at least 15 consecutive operating days:
- 31.d.i. During the sampling period, the permittee shall collect samples on at least 25 percent of the days in the sampling period (rounded up to the next whole day). Sampling days shall be spread throughout the sampling period in a random fashion.
  - 31.d.ii. Sampling shall be done as follows: [ 40 CFR 63.457(c)(3)]
    - 31.d.ii.(1) At least 3 sampling runs shall be made each sampling day at each sampling point;
    - 31.d.ii.(2) Each sampling run shall be for a minimum of a one hour period;
    - 31.d.ii.(3) Samples may be taken continuously or by taking multiple grab samples. If multiple grab samples are taken, they must be taken at approximately equal intervals over the sampling run; and
    - 31.d.ii.(4) The results of the sampling runs shall be averaged or the samples may be composited for each sampling day at each sampling point.
    - 31.d.ii.(5) The samples shall be analyzed for methanol using EPA Method 305, NCASI DI/MeOH 94.02, or an alternative method approved by EPA.
- 31.e. The permittee shall use the procedure in Condition 46 to validate the EF for each stream.
- 31.f. In the event that the EF for any stream or streams is not validated by the procedure above, the permittee shall extend the validation procedure described in Conditions 31.d and 31.e subject to the following:
- 31.f.i. The validation period shall be extended in blocks of at least 15 consecutive days, except that the total validation period shall not be greater than P days (the condensate collection averaging period) as specified in Condition 27.
  - 31.f.ii. The data from the initial validation period and all extensions (if any) for the calendar quarter in question shall be combined.
  - 31.f.iii. Validation extensions shall begin within 7 calendar days of receiving the previous period's sampling results, or within 30 days of the previous sampling period, whichever is later.
- 31.g. If the combined data from extended validation testing still fails to validate the EF, the permittee shall establish a new EF for each one that was not validated, in accordance with the following:
- 31.g.i. The permittee shall use the ICCS procedure (Condition 29) over a sampling period of not less than P days (the condensate collection averaging period).
  - 31.g.ii. The permittee may use the data collected during the most recent validation testing, including extensions, to fulfill all of part of the ICCS data requirements.

- 31.g.iii. Upon completion of the ICCS procedure, the permittee shall record the revised emission factor(s).
- 31.g.iv. The permittee shall use the new emission factor(s) retroactively to the beginning of the calendar quarter in which the verification testing in question was begun.
- 31.h. Failure to validate an emission factor does not in and of itself constitute a violation of this permit.
- 31.i. The permittee may combine the data collected for EF validation with the data that was used to determine the current EF(s). The following procedure shall be used:
  - 31.i.i. All data from all successful validation tests of the current EF must be used;
  - 31.i.ii. The permittee shall calculate the average and standard deviation of the combined data;
  - 31.i.iii. The permittee shall record the revised emission factor(s) and standard deviation(s); and
  - 31.i.iv. The permittee shall use the revised emission factor(s) retroactively to the beginning of the calendar quarter in which the most recent validation data was obtained.
- 31.j. Recordkeeping The permittee shall retain the following records:
  - 31.j.i. The condensate stream emission factors and standard deviations, and the dates on which the emission factors became effective.
  - 31.j.ii. each value of "d" and the number of validation tests required each year;
  - 31.j.iii. all verification sampling results;
  - 31.j.iv. all validation calculations and whether or not validation was successful;
  - 31.j.v. the number of samples used to determine the current EFs, including the number of samples used to initially determine the EFs, plus the number of validation samples used, if any.

#### Hardpiping Treatment

- 32. Applicable Requirement On and after April 16, 2001, the pulping process condensates subject to Condition 26 shall be treated according to the following:
  - 32.a. Discharge the pulping process condensates below the liquid surface of a biological treatment system meeting the treatment requirement specified below; and [40 CFR 63.446(e)(2)]
  - 32.b. Comply with one of the following treatment options:
    - 32.b.i. Treat the pulping process condensates to reduce or destroy the total HAP's by at least 92 percent or more by weight; or [40 CFR 63.446(e)(3)]
    - 32.b.ii. At mills that do not perform bleaching, treat the pulping process condensates to remove 3.3 kilograms or more of total HAP per megagram (6.6 pounds per ton) of ODP; or [40 CFR 63.446(e)(4)]

- 32.b.iii. At mills that perform bleaching, treat the pulping process condensates to remove 5.1 kilograms or more of total HAP per megagram (10.2 pounds per ton) of ODP. [ 40 CFR 63.446(e)(5) ]
- 32.c. For the purpose of complying with this condition, total HAP shall be measured as acetaldehyde, methanol, methyl ethyl ketone and propionaldehyde. [ 40 CFR 63.446(e)(2) and 63.457(g) ]

#### Performance tests for open biological treatment system

NOTE: Performance tests fall into two categories. The first category includes the initial and quarterly performance tests. The proposed duration of these performance tests is 3 days, but the final duration is up to the individual mill to decide.

The second category includes performance tests done after an operating parameter excursion. The proposed duration is 1 day. This duration is proposed because all sampling must be completed before corrections to the system may be made. Making this test of 1 day duration minimizes the time that the system must be operated out of the established parameter range.

If the initial & quarterly performance tests are of different duration than the excursion performance test, then the excursion performance tests are considered adequate to demonstrate compliance, but they are not considered equivalent for establishing or revising operating parameter ranges. If the tests are all of equal duration, then they can all be used to est. or revise operating parameter ranges.

#### Quarterly Performance Tests

- 33. Monitoring Requirement The permittee shall conduct initial and quarterly performance tests in accordance with this condition.
  - 33.a. Performance tests shall be performed on the schedule below: [40 CFR 63.453(j) and 40 CFR 63.7]
    - 33.a.i. after October 12, 2002, the permittee shall conduct a performance test within the first 45 days of each quarter; and
    - 33.a.ii. the permittee may conduct additional performance tests at any time.
  - 33.b. Sampling for the performance test shall be performed over a period of 3 consecutive days;
  - 33.c. At least one grab sample shall be taken at each sampling point on each sampling day. If more than one grab sample is taken at each sampling point, the samples at each point shall be averaged or the samples may be composited for each sampling day.
  - 33.d. For each sampling day, perform one of the following procedures, whichever is appropriate: [ 40 CFR 63.457(l) ]

- 33.d.i. the percent reduction test procedures specified in 40 CFR 63.457(l)(1) for total HAP, and calculate the daily HAP percent reduction; or
- 33.d.ii. the mass removal test procedures specified in 40 CFR 63.457(l)(2) for total HAP, and calculate the daily HAP mass removal.
- 33.e. Samples shall be analyzed as follows:
  - 33.e.i. Samples for the initial performance test and the quarterly performance tests conducted in the first quarter (annually) shall be performed for total HAP (acetaldehyde, methanol, methyl ethyl ketone and propionaldehyde).
  - 33.e.ii. Samples for the quarterly performance tests conducted in the second, third and fourth quarters may be analyzed for total HAP as specified above, or may be analyzed using the applicable methanol procedure in 40 CFR 63.457(l)(1) or (2) and the value of  $r$  determined during the first quarter test instead of measuring the additional HAP to determine a new value of  $r$ .
- 33.f. For each sampling day, perform the procedures specified in sections III. C. and D. of Appendix E of 40 CFR Part 63 Subpart S for nonthoroughly mixed open biological treatment systems. [ 40 CFR 63.457(l)(3) ]
- 33.g. Perform the relevant procedures specified in section III. G. of Appendix E of 40 CFR Part 63 Subpart S. [ 40 CFR 63.457(l)(3) ]
- 33.h. On each sampling day, perform the monitoring specified in this Condition. The permittee shall monitor the parameters specified in Option 1, unless alternative parameters have been approved, then monitor as in Option 2.
  - 33.h.i. Option 1, monitor the following:
    - 33.h.i.(1) Composite daily sample of outlet soluble BOD5 concentration to monitor for maximum daily and maximum monthly average;
    - 33.h.i.(2) Mixed liquor volatile suspended solids;
    - 33.h.i.(3) Horsepower of aerator unit(s);
    - 33.h.i.(4) Inlet liquid flow; and
    - 33.h.i.(5) Liquid temperature.
  - 33.h.ii. Option 2, monitor the approved alternate parameters.
- 33.i. Upon completion of the sampling period, calculate the arithmetic average of the daily percent reduction of total HAP or the daily HAP mass removal rate, whichever is appropriate.

#### Operating Parameters and Ranges

- 33.j. Operating parameters and ranges shall be established or revised as follows:
  - 33.j.i. The following notification procedures must be followed in addition to any other notifications that may be required: [40 CFR 63.455(e)]

- 33.j.i.(1) The permittee must give at least 15 calendar days notice in writing before conducting the performance test; and
- 33.j.i.(2) The permittee must confirm the exact time and date of the performance test no less than 24 hours before conducting the performance test. Confirmation may be by telephone or fax.
- 33.j.ii. Operating parameters and/or ranges may only be established or revised from monitoring results obtained during tests that return a compliant result.
- 33.j.iii. Operating parameter ranges shall be not less than the lowest, nor greater than the highest (as appropriate) average value(s) of the operating parameter(s) recorded during the performance test(s) conducted per this Condition.
- 33.j.iv. Operating parameters and/or ranges established or revised pursuant to this condition are effect retroactively from the date following the last sampling date.
- 33.j.v. The permittee shall comply with one of the options below:
  - 33.j.v.(1) Option 1: The permittee shall establish operating parameter ranges for all of the following parameters:
    - 33.j.v.(1)(a) Composite daily outlet soluble BOD5 concentration;
    - 33.j.v.(1)(b) Mixed liquor volatile suspended solids;
    - 33.j.v.(1)(c) Horsepower of aerator unit(s);
  - 33.j.v.(2) Option 2: The permittee may propose to monitor one or more alternate operating parameters and establish ranges for the alternative parameters. If the permittee chooses this option, the permittee shall submit a request for approval of the proposed alternate parameters with, or prior to, the initial performance test report.

#### Notifications and Submittals

- 33.k. Pretest notification and submittal of test results shall be as specified in Condition 44.
- 33.l. The permittee shall submit the following with, or prior to, the Initial Performance Test report:
  - 33.l.i. a report describing the zones of the open biological treatment system and how the zones were determined; and
  - 33.l.ii. the QA/QC plan as required by Section III.G. of Appendix E of 40 CFR Part 63 Subpart S.
- 33.m. Recordkeeping The permittee shall record the following:
  - 33.m.i. The date(s) of all performance tests;

- 33.m.ii. All sampling results;
- 33.m.iii. The daily percent reduction or mass removal results for total HAP or methanol;
- 33.m.iv. The arithmetic average percent reduction or mass removal for total HAP or methanol;
- 33.m.v. All information specified in sections III.C. and D. of Appendix E of 40 CFR Part 63 Subpart S;
- 33.m.vi. All information specified in section III.G. of Appendix E of 40 CFR Part 63 Subpart S;
- 33.m.vii. The permittee shall record the parameters specified in Option 1, unless alternative parameters have been approved, then record the parameters in Option 2.
  - 33.m.vii.(1) Option 1, record the following:
    - 33.m.vii.(1)(a) Composite daily sample of outlet soluble BOD5 concentration to monitor for maximum daily and maximum monthly average;
    - 33.m.vii.(1)(b) Mixed liquor volatile suspended solids;
    - 33.m.vii.(1)(c) Horsepower of aerator unit(s);
    - 33.m.vii.(1)(d) Inlet liquid flow; and
    - 33.m.vii.(1)(e) Liquid temperature.
  - 33.m.vii.(2) Option 2, record the approved alternate parameters.

#### Daily Monitoring

- 34. Monitoring Requirement On a daily basis, the permittee shall perform the following monitoring procedures for each open biological treatment system. [40 CFR 63.453(j)(1)]
  - 34.a. If the permittee has received approval to monitor alternate parameters, conduct daily monitoring of the site-specific parameters established according to the procedures specified in Condition 33.
  - 34.b. Recordkeeping The permittee shall record the following:
    - 34.b.i. The value(s) of the approved operating parameter(s).
    - 34.b.ii. The dates of any parameter out-of-range excursions, and the results of the performance test if one is performed.
    - 34.b.iii. Any maintenance or changes made to the process or control device after the beginning of a parameter excursion that would influence the results of the determination.

#### Subpart A recordkeeping

- 34.b.iv. the occurrence and duration of each startup, shutdown or malfunction [40 CFR 63.10(b)(2)(i)];
- 34.b.v. the occurrence and duration of each malfunction of air pollution control equipment [40 CFR 63.10(b)(2)(ii)];
- 34.b.vi. all major maintenance performed on the air pollution control equipment [40 CFR 63.10(b)(2)(iii)].

- 34.b.vii. actions taken during periods of startup, shutdown or malfunction when such actions are different from procedures specified in the SSM plan [40 CFR 63.10(b)(2)(iv)];
  - 34.b.viii. actions taken during periods of startup, shutdown or malfunction when such actions are consistent with procedures specified in the SSM plan [40 CFR 63.10(b)(2)(v)];
  - 34.b.ix. the date and time of commencement and completion of each period of excess emissions and parameter monitoring exceedences that occur during startup, shutdown or malfunction of the affected source [40 CFR 63.10(c)(7)];
  - 34.b.x. the date and time of commencement and completion of each period of excess emissions and parameter monitoring exceedences that occurs during periods other than startup, shutdown or malfunction of the affected source [40 CFR 63.10(c)(8)];
  - 34.b.xi. the nature and cause of any malfunction (if known) [40 CFR 63.10(c)(10)];
  - 34.b.xii. the corrective action taken or preventive measures adopted [40 CFR 63.10(c)(11)];
  - 34.b.xiii. each period in which a CMS is malfunctioning or inoperative (including out of control periods) [40 CFR 63.10(b)(2)(vi)];
  - 34.b.xiv. all required measurements needed to demonstrate compliance with a relevant standard, as required in the relevant monitoring Condition(s) [40 CFR 63.10(b)(2)(vii)];
  - 34.b.xv. all measurements as may be necessary to determine the conditions of performance tests and performance evaluations, as required in the relevant monitoring Condition(s) [40 CFR 63.10(b)(2)(ix)];
  - 34.b.xvi. all CMS calibration checks [40 CFR 63.10(b)(2)(x)];
  - 34.b.xvii. all adjustments and maintenance performed on CMS [40 CFR 63.10(b)(2)(xi)];
  - 34.b.xviii. all required CMS measurements [40 CFR 63.10(c)(1)];
  - 34.b.xix. the date and time identifying each period during which the CMS was inoperative except for zero (low-level) and high-level checks [40 CFR 63.10(c)(5)];
  - 34.b.xx. the nature of the repairs or adjustments to the CMS that was inoperative or out of control [40 CFR 63.10(c)(12)].
35. Applicable Requirement If an excursion occurs that is below the minimum, or above the maximum operating parameter value established in accordance with Condition 33, the permittee may choose to conduct a performance test in accordance with Condition 36 to demonstrate compliance. An operating parameter excursion is considered a violation of the standard if a performance test is not conducted. [40 CFR 63.453(p)]
- 35.a. If the permittee chooses to conduct a performance test, as soon as practical after the beginning of the monitoring parameter excursion, the following requirements shall be met:
- 35.a.i. Before the steps in Condition 35.a.ii. are performed, all sampling and measurements necessary to meet the performance test requirements shall be conducted.

- 35.a.ii. Steps shall be taken to repair or adjust the operation of the process to end the parameter excursion period.
- 35.a.iii. Steps shall be taken to minimize total HAP emissions to the atmosphere during the parameter excursion period.
- 35.a.iv. A parameter excursion is not a violation of the applicable emission standard if the results of the performance test conducted in accordance with this condition demonstrates compliance with the standard.
  - 35.a.iv.(1) Conduct a performance test as specified in Condition 36 using the monitoring data specified in Condition 35.a.i. that coincides with the time of the parameter excursion. No maintenance or changes shall be made to the open biological treatment system after the beginning of a parameter excursion that would influence the results of the performance test.
  - 35.a.iv.(2) If the results of the performance test demonstrate compliance with the applicable standard, then the parameter excursion is not a violation of the applicable standard.
  - 35.a.iv.(3) If the results of the performance test do not demonstrate compliance with the applicable standard because the total HAP mass entering the open biological treatment system is below the level needed to demonstrate compliance with the standard, then the permittee shall perform the following comparisons:
    - 35.a.iv.(3)(a) If the value of  $f_{bio}(\text{MeOH})$  determined during the performance test is within the range of values established during the initial and subsequent performance tests, then the parameter excursion is not a violation of the applicable standard.
    - 35.a.iv.(3)(b) If the value of  $f_{bio}(\text{MeOH})$  determined during the performance test is not within the range of values established during the initial and subsequent performance tests, then the parameter excursion is a violation of the applicable standard.

Performance tests conducted to verify compliance after an operating parameter excursion

- 36. Monitoring Requirement Performance tests conducted to verify compliance in the event of an operating parameter excursion shall be performed as described below. [40 CFR 63.453(j) and 40 CFR 63.7]
  - 36.a. If unsafe sampling conditions exist, the permittee shall follow the procedure in Condition 36.b. ; otherwise, follow the procedure in Condition 36.c.

Unsafe sampling conditions procedure

36.b. If a monitoring parameter excursion has occurred and the permittee chooses to conduct a performance test to verify compliance, and a worker would be exposed to dangerous, hazardous, or otherwise unsafe sampling conditions, the permittee shall perform the following:

36.b.i. The procedures in Condition 36.b. shall be performed each day until the dangerous, hazardous or otherwise unsafe conditions have passed; and

36.b.ii. The procedures in Condition 36.c. shall be performed as soon as practical but no later than 24 hours after the conditions have passed that exposed a worker to dangerous, hazardous or otherwise unsafe conditions.

36.b.iii. The permittee must notify the Department no more than 24 hours after the onset of the unsafe conditions. Notification shall include the reason(s) why sampling cannot be safely conducted. Notification may be made by telephone or fax.

36.b.iv. At a minimum, 1 grab sample shall be taken at each sampling point. [ 40 CFR 63 Subpart S, Appendix E III.G. ]

36.b.v. For each sampling day, perform the procedures specified in sections III.E. and F. and IV. of Appendix E of 40 CFR Part 63 Subpart S for nonthoroughly mixed open biological treatment systems. [ 40 CFR 63.457(l)(3) ]

36.b.vi. Perform the relevant procedures specified in III.G. of Appendix E of 40 CFR Part 63 Subpart S. [ 40 CFR 63.457(l)(3) ]

36.b.vii. For each sampling day, perform one of the following procedures, whichever is appropriate: [40 CFR 63.457(l)]

36.b.vii.(1) the percent reduction test procedures specified in 40 CFR 63.457(l)(1) for total HAP, and calculate the daily HAP percent reduction; or

36.b.vii.(2) the mass removal test procedures specified in 40 CFR 63.457(l)(2) for total HAP, and calculate the daily HAP mass removal.

36.b.viii. Upon completion of the sampling period, calculate the daily percent reduction of total HAP or the daily HAP mass removal rate, whichever is appropriate.

Safe sampling conditions procedure

36.c. If a monitoring parameter excursion has occurred and the permittee chooses to conduct a performance test to verify compliance, and a worker would not be exposed to dangerous, hazardous, or otherwise unsafe sampling conditions, or the dangerous, hazardous or otherwise unsafe conditions have passed, the permittee shall perform the following:

- 36.c.i. The performance test shall be done over a one-day period.
- 36.c.ii. At least one grab sample shall be taken at each sampling point on each sampling day. If more than one grab sample is taken at each sampling point, the samples at each point shall be averaged or the samples may be composited for each sampling day.
- 36.c.iii. For each sampling day, perform the procedures specified in section III. C., and D. of Appendix E of 40 CFR Part 63 Subpart S for nonthoroughly mixed open biological treatment systems. [ 40 CFR 63.457(l)(3) ]
- 36.c.iv. Perform the relevant procedures specified in III.G. of Appendix E of 40 CFR Part 63 Subpart S. [ 40 CFR 63.457(l)(3) ]
- 36.c.v. For each sampling day, perform one of the following procedures, whichever is appropriate:
  - 36.c.v.(1) the percent reduction test procedures specified in 40 CFR 63.457(l)(1) for total HAP, and calculate the daily HAP percent reduction; or
  - 36.c.v.(2) the mass removal test procedures specified in 40 CFR 63.457(l)(2) for total HAP, and calculate the daily HAP mass removal.
- 36.c.vi. Upon completion of the sampling period, calculate the daily percent reduction of total HAP or the daily HAP mass removal rate, whichever is appropriate.
- 36.d. Recordkeeping The permittee shall record the following:
  - 36.d.i. The dates of the performance test;
  - 36.d.ii. The conditions that made sampling unsafe, when applicable;
  - 36.d.iii. All sampling results;
  - 36.d.iv. The daily percent reduction or mass removal results for total HAP or methanol;
  - 36.d.v. The arithmetic average percent reduction or mass removal for total HAP or methanol.
  - 36.d.vi. All information specified in sections III.C. and D. of Appendix E of 40 CFR Part 63 Subpart S.
  - 36.d.vii. All information specified in section III.G. of Appendix E of 40 CFR Part 63 Subpart S.
  - 36.d.viii. All information specified in sections III.E. and F. and IV. of Appendix E of 40 CFR Part 63 Subpart S, if the unsafe sampling condition procedure was used.

## CLOSED VENT SYSTEM REQUIREMENTS

### Summary of requirements

Applicable Requirement	Condition Number	Pollutant/Parameter	Limit/Standard	Averaging Time	Testing Condition	Monitoring Condition
40 CFR 63.450	37	Closed vent system standards	See Condition 37	N/A	N/A	40
40 CFR 63.453(k)	39	Closed vent system corrective action	See Condition 39	N/A	N/A	40

TABLE CV-1 This table lists the closed-vent systems that are subject to the requirements of this section.

HVLC closed-vent system
LVHC closed-vent system
Bleach plant scrubber closed-vent system
Closed-vent systems and condensate storage tanks associated with the pulping condensates closed collection system

37. Applicable Requirement The permittee shall comply with the following standards for enclosures and closed-vent systems. [40 CFR 63.450 and 40 CFR 63.440(d)]
- 37.a. Each enclosure and closed-vent system listed in Table CV-1 shall meet the requirements specified in this Condition. [40 CFR 63.450(a)]
- 37.b. Each enclosure shall maintain negative pressure at each enclosure or hood opening as demonstrated by the procedures specified in 40 CFR 63.457(e). Each enclosure or hood opening closed during the initial performance test specified in 40 CFR 63.457(a) shall be maintained in the same closed and sealed position as during the initial performance test at all times except when necessary to use the opening for sampling, inspection, maintenance, or repairs. [40 CFR 63.450(b)]
- 37.c. Each component of the closed-vent system used to comply with 40 CFR 63.443(c)(refers to pulping system), 63.444(b)(sulfite process, n/a), and 63.445(b)(bleaching system) that is operated at positive pressure and located prior to a control device shall be designed for and operated with no detectable leaks as indicated by an instrument reading of less than 500 parts per million by volume above background, as measured by the procedures specified in 40 CFR 63.457(d). [40 CFR 63.450(c)]
- 37.d. Each bypass line in the closed-vent system that could divert vent streams containing HAP to the atmosphere without meeting the emission limitations in 40 CFR 63.443(pulping system), 63.444(sulfite, n/a), or 63.445(bleaching system) shall comply with either of the following requirements: [40 CFR 63.450(d)]
- 37.d.i. On each bypass line, the owner or operator shall install, calibrate, maintain, and operate according to manufacturer's specifications a flow indicator or any indicating device(s) that provide(s) a positive indication of bypassing, and that provides a record of bypassing at least once every 15 minutes; or

- 37.d.ii. For bypass line valves that are not computer controlled, the owner or operator shall maintain the bypass line valve in the closed position with a car seal or a seal placed on the valve or closure mechanism in such a way that valve or closure mechanism cannot be opened without breaking the seal.
38. **Applicable Requirement** If a condensate tank is used in the closed collection system for the regulated pulping condensates, the tank shall meet the following requirements: [40 CFR 63.446(d)(2)]
- 38.a. The fixed roof and all openings (e.g., access hatches, sampling ports, gauge wells) shall be designed and operated with no detectable leaks as indicated by an instrument reading of less than 500 parts per million above background, and vented into a closed-vent system that meets the requirements in Condition 37 and routed to a control device that meets the requirements in Conditions 9 or 11; and
- 38.b. Each opening shall be maintained in a closed, sealed position (e.g., covered by a lid that is gasketed and latched) at all times that the tank contains regulated pulping process condensates or any HAP removed from a pulping process condensate stream except when it is necessary to use the opening for sampling, removal, or for equipment inspection, maintenance, or repair.
39. **Applicable Requirement** If an inspection required by Condition 40 identifies visible defects in ductwork, piping, enclosures or connections to covers in the closed-vent systems listed in Table CV-1, or if an instrument reading of 500 parts per million by volume or greater above background is measured, or if enclosure openings are not maintained at negative pressure, then the following corrective actions shall be taken as soon as practicable. [40 CFR 63.453(k)(6)]
- 39.a. A first effort to repair or correct the closed-vent system shall be made as soon as practicable but no later than 5 calendar days after the problem is identified.
- 39.b. The repair or corrective action shall be completed no later than 15 calendar days after the problem is identified. Delay of repair or corrective action is allowed if the repair or corrective action is technically infeasible without a process unit shutdown or if the owner or operator determines that the emissions resulting from immediate repair would be greater than the emissions likely to result from delay or repair. Repair of such equipment shall be completed by the end of the next process unit shutdown.
40. **Monitoring Requirement** Beginning April 16, 2001, the permittee shall monitor each closed-vent system as specified in this Condition. [40 CFR 63.453(k)]
- 40.a. For each closed-vent system, the permittee shall prepare and maintain a site-specific inspection plan including a drawing or schematic of the components of applicable affected equipment. [40 CFR 63.454(b)]

#### **Annual Monitoring**

- 40.b. The following inspections of enclosures and closed-vent systems are required annually:

- 40.b.i. For positive pressure closed-vent systems or portions of positive pressure closed-vent systems, including condensate collection tanks, demonstrate no detectable leaks as specified in Condition 37.c.(40 CFR 63.450(c) ) measured by the procedures in 40 CFR 63.457(d).

#### **Monthly Monitoring**

40.c. **Monthly Monitoring:** The following inspections of enclosures and closed-vent systems listed in Table CV-1 are required at least once every 30 days and at other times as requested by the Department: [40 CFR 63.453(k) and 40 CFR 63.453(l) ]

- 40.c.i. For each enclosure opening, a visual inspection of the closure mechanism specified in Condition 37.b ( 40 CFR 63.450(b) ) shall be performed to ensure the opening is maintained in the closed position and sealed.
- 40.c.ii. Each closed-vent system shall be visually inspected. The visual inspection shall include inspection of ductwork, piping, enclosures, and connections to covers for visible evidence of defects.
- 40.c.iii. Bypass line valves that are not computer controlled shall be inspected to ensure that the valve is maintained in the closed position and the emission point gas stream is not diverted through the bypass line.

40.d. **Recordkeeping** For each applicable enclosure opening, closed-vent system, and closed collection system, the owner or operator shall maintain a site-specific inspection plan including a drawing or schematic of the components of applicable affected equipment and shall record the following information for each inspection: [40 CFR 63.454(b)]

- 40.d.i. Date of inspection;
- 40.d.ii. The equipment type and identification;
- 40.d.iii. Results of negative pressure tests for enclosures;
- 40.d.iv. Results of leak detection tests (if applicable, annual requirement only);
- 40.d.v. The nature of the defect or leak and the method of detection (i.e., visual inspection or instrument detection);
- 40.d.vi. The date the defect or leak was detected and the date of each attempt to repair the defect or leak;
- 40.d.vii. Repair methods applied in each attempt to repair the defect or leak;
- 40.d.viii. The reason for the delay if the defect or leak is not repaired within 15 days after discovery;
- 40.d.ix. The expected date of successful repair of the defect or leak if the repair is not completed within 15 days;
- 40.d.x. The date of successful repair of the defect or leak; and
- 40.d.xi. The position and duration of opening of bypass line valves and the condition of any valve seals. The duration of a manual bypass shall be determined from the time the valve seal was broken (or unlocked) to the time a new seal was put in place (or relocked).

## INDIVIDUAL DRAIN SYSTEM REQUIREMENTS

### Summary of requirements

Applicable Requirement	Condition Number	Pollutant/Parameter	Limit/Standard	Averaging Time	Testing Condition	Monitoring Condition
40 CFR 63.446(d)(1) and 40 CFR 63.962	41	Individual drain system requirements	See Condition 41	N/A	N/A	43
40 CFR 63.453(k)	42	Individual drain system corrective actions	See Condition 42	N/A	N/A	43

41. Applicable Requirement The permittee shall comply with the following Individual Drain System requirements. [40 CFR 63.446(d)(1) and 40 CFR 63.962]

41.a. The permittee shall control air emissions from the individual drain system used to control emissions from pulping condensates using one or a combination of the following:

41.a.i. Covers, water seals, and other air emission control equipment as specified in paragraph 41.b of this section.

41.a.ii. Hard-piping.

41.a.iii. Venting of the individual drain system through a closed vent system to a control device in accordance with the following requirements:

41.a.iii.(1) The individual drain system is designed and operated such that an internal pressure in the vapor headspace in the system is maintained at a level less than atmospheric pressure when the control device is operating, and

41.a.iii.(2) The closed vent system and control device are designed and operated in accordance with the requirements of Condition 9.c or 11.d (40 CFR 63.443(d) ), and Condition 37 (40 CFR 63.450).

41.b. Permittees controlling air emission from an individual drain system in accordance with paragraph 41.a shall meet the following requirements:

41.b.i. The individual drain system shall be designed to segregate the organic vapors from wastewater managed in the controlled individual drain system from entering any other individual drain system that is not controlled for air emissions in accordance with the standards specified in this Condition.

41.b.ii. Drain control requirements. Each drain shall be equipped with either a water seal or a closure device in accordance with the following requirements:

41.b.ii.(1) When a water seal is used, the water seal shall be designed such that either:

41.b.ii.(1)(a) The outlet to the pipe discharging the wastewater extends below the liquid surface in the water seal of the drain; or

41.b.ii.(1)(b) A flexible shield or other device is installed which restricts wind motion across the open space between the outlet of the pipe discharging the wastewater and the drain.

- 41.b.ii.(2) When an closure device is used (e.g., securing a cap or plug on a drain that is not receiving wastewater), the closure device shall be designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the drain opening and the closure device.
- 41.b.iii. Junction box control requirements. Each junction box shall be equipped with controls as follows:
  - 41.b.iii.(1) The junction box shall be equipped with a closure device (e.g., manhole cover, access hatch) that is designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, other open spaces in the closure device or between the perimeter of the junction box opening and the closure device.
  - 41.b.iii.(2) If the junction box is vented, the junction box shall be vented in accordance with the following requirements:
    - 41.b.iii.(2)(a) The junction box shall be vented through a closed vent system to a control device except as provided for in paragraph 41.b.iii.(2)(b). The closed vent system and control device shall be designed and operated in accordance with the standards specified in Condition 9.c or 11.d (40 CFR 63.443(d) ), and Condition 37 (40 CFR 63.450).
    - 41.b.iii.(2)(b) As an alternative to paragraph 41.b.iii.(2)(a) the permittee may vent the junction box directly to the atmosphere when all of the following conditions are met:
      - 41.b.iii.(2)(b)(1) The junction box is filled and emptied by gravity flow (i.e., there is no pump) or is operated with no more than slight fluctuations in the liquid level. Large changes in the size of the junction box vapor headspace created by using a pump to repeatedly empty and then refill the junction box do not meet this Condition.
      - 41.b.iii.(2)(b)(2) The vent pipe installed on the junction box shall be at least 90 centimeters in length and no greater than 10.2 centimeters in diameter.
      - 41.b.iii.(2)(b)(3) Water seals are installed at the liquid entrance(s) to or exit from the junction box to restrict ventilation in the individual drain system and between components in the individual drain system. The permittee shall demonstrate (e.g., by visual inspection or smoke test) upon request by the Administrator that the junction box water seal is properly designed and restricts ventilation.
- 41.b.iv. Sewer line control requirements. Each sewer line shall not be open to the atmosphere and shall be covered or closed in a manner such that there are no visible cracks, holes, gaps, or other open spaces in the sewer line joints, seals, or other emission interfaces.
- 41.b.v. Operating requirements. The permittee shall operate the air emission controls required by paragraphs 41.b.ii, and 41.b.iv of this section in accordance with the following requirements:

- 41.b.v.(1) Each closure device shall be maintained in a closed position whenever wastewater is in the individual drain system except when it is necessary to remove or open the closure device for sampling or removing material in the individual drain system, or for equipment inspection, maintenance, or repair.
  - 41.b.v.(2) Each drain equipped with a water seal and open to the atmosphere shall be operated to ensure that the liquid in the water seal is maintained at the appropriate level. Examples of acceptable means for complying with this provision include but are not limited to using a flow-monitoring device indicating positive flow from a main to a branch water line supplying a trap; continuously dripping water into the trap using a hose; or regular visual observations.
42. Applicable Requirement If an inspection identifies visible defects in the Individual Drain Systems specified in Condition 41, or if an instrument reading of 500 ppm or greater above background is measured, the following corrective actions shall be taken: [40 CFR 63.453(l) and 40 CFR 63.964(b)]
- 42.a. (1) The permittee shall make first efforts at repair of the defect no later than 5 calendar days after detection and repair shall be completed as soon as possible but not later than 15 calendar days after detection except as provided in paragraph (b) of this Condition.
  - 42.b. Repair of a defect may be delayed beyond 15 calendar days if the permittee determines that repair of the defect requires emptying or temporary removal from service of the individual drain system and no alternative capacity is available at the facility site to accept the wastewater normally managed in the individual drain system. In this case, the permittee shall repair the defect at the next time the process or unit that is generating the wastewater managed in individual drain system stops operation. Repair of the defect shall be completed before the process or unit resumes operation.
43. Monitoring Requirement The permittee shall inspect the individual drain system used to comply with Condition 32 at least once every 30 days and in accordance with the following requirements: [40 CFR 63.453(l) , 40 CFR 63.964(a)]
- 43.a. The individual drain system shall be visually inspected as follows to check for defects that could result in air emissions to the atmosphere.
    - 43.a.i. Visually inspect each drain as follows:
      - 43.a.i.(1) When the drain is using a water seal to control air emissions, the permittee shall verify appropriate liquid levels are being maintained and identify any other defects that could reduce water seal control effectiveness.
      - 43.a.i.(2) When the drain is using a closure device to control air emissions, the permittee shall visually inspect each drain to verify that the closure device is in place and there are no defects. Defects include, but are not limited to, visible cracks, holes, or gaps in the closure devices; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing plugs, caps, or other closure devices.

- 43.a.ii. The permittee shall visually inspect each junction box to verify that closure devices are in place and there are no defects. Defects include, but are not limited to, visible cracks, holes, or gaps in the closure devices; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.
- 43.a.iii. The permittee shall visually inspect the unburied portion of each sewer line to verify that all closure devices are in place and there are no defects. Defects include, but are not limited to, visible cracks, holes, gaps, or other open spaces in the sewer line joints, seals, or other emission interfaces.
- 43.a.iv. In the event that a defect is detected, the permittee shall repair the defect in accordance with Condition 42.

(Note: Monitoring of condensate collection tanks is addressed in Condition 40.b).

- 43.b. Recordkeeping For each applicable enclosure opening, closed-vent system, and closed collection system, the owner or operator shall maintain a site-specific inspection plan including a drawing or schematic of the components of applicable affected equipment and shall record the following information for each inspection: [40 CFR 63.453(l) and 40 CFR 63.454(b)]

- 43.b.i. Date of inspection;
- 43.b.ii. The equipment type and identification;
- 43.b.iii. Results of negative pressure tests for enclosures;
- 43.b.iv. Results of leak detection tests (if applicable, annual requirement only)
- 43.b.v. The nature of the defect or leak and the method of detection (i.e., visual inspection or instrument detection);
- 43.b.vi. The date the defect or leak was detected and the date of each attempt to repair the defect or leak;
- 43.b.vii. Repair methods applied in each attempt to repair the defect or leak;
- 43.b.viii. The reason for the delay if the defect or leak is not repaired within 15 days after discovery;
- 43.b.ix. The expected date of successful repair of the defect or leak if the repair is not completed within 15 days;
- 43.b.x. The date of successful repair of the defect or leak; and
- 43.b.xi. The position and duration of opening of bypass line valves and the condition of any valve seals. The duration of a manual bypass shall be determined from the time the valve seal was broken (or unlocked) to the time a new seal was put in place (or relocked).

#### SOURCE TESTING & EMISSION FACTOR VERIFICATION PROCEDURE

- 44. SOURCE TESTING AND EMISSION FACTOR VERIFICATION PROCEDURE If source testing and/or emission factor verification is required, the permittee shall use the following procedures, unless otherwise specified in this permit or approved in writing by the Department:
  - 44.a. In the case of source tests and emission factor verification tests (other than initial performance tests), the permittee shall notify the Department at least 15 days prior to conducting any source tests or emission factor verification tests by submitting a source test plan to the Department.
  - 44.b. Submittal of test results:

- 44.b.i. The permittee shall submit a summary of all source tests and emission factor verification tests (other than initial performance tests) to the Department within 30 days of any test. The summary shall include the following information:
- 44.b.i.(1) Emissions unit and monitoring point identification;
  - 44.b.i.(2) Emission results in units that are consistent with the emissions limits on the emissions unit(s) being tested (e.g., gr/dscf, lb/hour, lb per unit throughput, etc.);
  - 44.b.i.(3) Process parameters during the test (e.g., material throughput, types and amounts of fuels used, heat input, etc.); and
  - 44.b.i.(4) Control device operating parameters, if applicable.
- 44.c. The permittee shall conduct all testing in accordance with the approved source test plan.
- 44.d. Only regular operating staff may adjust the processes or emission control device parameters during a compliance source test and within two (2) hours prior to the tests. Any operating adjustments made during a compliance source test, which are a result of consultation during the tests with source testing personnel, equipment vendors, or consultants, may render the source test invalid.
- 44.e. For the purpose of establishing or revising operating parameter ranges, the following are allowed:
- 44.e.i. The permittee may perform pretest runs at any time prior to the compliance source test or emission factor verification test, subject to the following conditions:
    - 44.e.i.(1) Pretest run results are intended only to help predetermine operating parameter values to be used during the actual compliance source testing or emission factor verification testing, but may not be used themselves to establish operating parameter ranges required elsewhere in this permit;
    - 44.e.i.(2) Pretest runs may be of any duration;
    - 44.e.i.(3) Pretest run results may not be used as part of the compliance demonstration or emission factor verification;
    - 44.e.i.(4) Pretest runs must be completed prior to beginning the compliance source testing or emission factor verification testing, and no pretest runs may be conducted between individual compliance source test or emission factor verification test runs.
  - 44.e.ii. The permittee may operate outside the applicable parameter range(s) during pretest runs and during the compliance source test or emission factor verification test for the purpose of revising or expanding the allowed operating parameter ranges.
  - 44.e.iii. This condition does not authorize non-compliance with any applicable standard or limitation. Noncompliance with an applicable standard or limitation that occurs as a result of operation outside established operating parameter range(s) must be reported as an excess emission.

- 44.f. All compliance source tests shall be performed at 90 to 110 percent of the normal maximum operating rate. For purposes of this permit, the normal maximum operating rate is defined as the 90th percentile of the average daily operating rates during a 12 month period immediately preceding the source test.
- 44.g. Each source test shall consist of at least three (3) test runs and the emissions results shall be reported as the arithmetic average of all valid test runs. For a source test to be accepted, there must be at least two valid test runs.

#### CONDENSATE EMISSION FACTOR VERIFICATION – CALCULATING 'D'

45. The permittee shall use the following procedure to determine the value of 'd'.
- 45.a. Using the sample results from each liquid stream during the Initial Condensate Characterization Study (ICCS) or most recent ICCS procedure, calculate the averages and standard deviations of the samples taken as indicated in the table below.

Values determined for ICCS procedure:				
Stream	No. of Samples	Sample results, lb/ODTP	Average MeOH Content, lb/ODTP	Standard Deviation, lb/ODTP
A	$n_1$	$xa_1, xa_2, xa_3, \dots$	$a_1$	$S_{a1}$
B	$n_1$	$xb_1, xb_2, xb_3, \dots$	$b_1$	$S_{b1}$
...	...	...	...	...
M	$n_1$	$xm_1, xm_2, xm_3, \dots$	$m_1$	$S_{m1}$

#### Nomenclature:

- the subscript Roman numeral I refers to data from the most recent ICCS procedure;
- streams are identified as stream A, stream B, ..., stream M;
- $m$  is the number of named streams sampled;
- $n_1$  is the number of samples taken;
- $xa_1, xa_2$ , etc. are the individual sample results for stream A;  $xb_1, xb_2$ , etc. are the individual sample results for stream B, etc.;
- $a_1$  is the average of the sample results for stream A;  $b_1$  is the average of the sample results for stream B, etc.;
- $S_{a1}$  is the standard deviation of the sample results for stream A;  $S_{b1}$  is the standard deviation of the sample results for stream B, etc.

#### Calculations:

The average of the samples for stream A is calculated as (others similar):

$$a_1 = \frac{xa_1 + xa_2 + \dots + xa_n}{n_1}$$

The standard deviation of the samples for stream A is calculated as (others similar):

$$S_{al} = \sqrt{\frac{(xa_1 - a_1)^2 + (xa_2 - a_1)^2 + \dots + (xa_n - a_1)^2}{n_1 - 1}}$$

- 45.b. Calculate the standard deviation of the mixture for the samples collected during the ICCS or most recent ICCS retest as follows:

$$S_{mix} = \sqrt{(S_{al})^2 + (S_{bl})^2 + (S_{cl})^2 \dots + (S_{ml})^2}$$

- 45.c. Calculate the standard deviation of the  $n_1$ -day averages ( $S_{avg}$ ) of the methanol content of the mixture during the most recent ICCS procedure as follows:

$$S_{avg} = \frac{S_{mix}}{\sqrt{P}}$$

where P is the condensate collection averaging period.

- 45.d. Calculate the average amount of methanol collected per day (total of all named streams) during the previous calendar year, in lb methanol/ODTP, as determined from daily monitoring of the named streams. The average methanol collected per day is denoted by Y.

- 45.e. Select the amount of methanol that must be collected (Z) that applies to the facility, as follows:

Z = 7.2 lb/ODTP for an unbleached kraft pulp mill; or

Z = 11.1 lb/ODTP for a bleached kraft pulp mill.

- 45.f. Calculate the value of 'd' as follows:

$$d = \frac{(Y - Z)}{S_{avg}}$$

#### CONDENSATE EMISSION FACTOR VERIFICATION PROCEDURE

46. The permittee shall use the following procedure for Emission Factor (EF) verification:

Note on the general procedure: If the average methanol content of each stream during the EF verification test is greater than the current EF, the EF is considered verified. Otherwise, conduct a one-sided t-test to determine whether or not the average methanol content of each stream during the EF verification test is significantly less than the data collected during the most recent ICCS procedure.

- 46.a. For each stream, calculate the average of the samples taken, and compare the averages to the current EF's.

- 46.a.i. If the average is greater than or equal to the current EF, then the EF is verified and the remaining calculations in this Condition are not required for that stream.
- 46.a.ii. If the average is less than the EF, then perform the calculations specified in the remainder of this Condition.

46.b. Calculate the standard deviation of the samples taken as indicated in the table below:

Values determined for EF verification:				
Stream	No. of Samples	Sample results, lb/ODTP	Average MeOH Content, lb/ODTP	Standard Deviation, lb/ODTP
A	$n_{II}$	$ya_1, ya_2, ya_3, \dots$	$a_{II}$	$S_{aII}$
B	$n_{II}$	$yb_1, yb_2, yb_3, \dots$	$b_{II}$	$S_{bII}$
...	...	...	...	...
M	$n_{II}$	$ym_1, ym_2, ym_3, \dots$	$m_{II}$	$S_{mII}$

Nomenclature:

- the subscript Roman numeral II refers to data from the most recent verification testing procedure;
- named streams are identified as stream A, stream B, ..., stream M;
- m is the number of named streams sampled;
- $n_{II}$  is the number of samples taken;
- $ya_1, ya_2$ , etc. are the individual sample results for stream A;  $yb_1, yb_2$ , etc. are the individual sample results for stream B (and so on);
- $a_{II}$  is the average of the sample results for stream A;  $b_{II}$  is the average of the sample results for stream B, etc.;
- $S_{aII}$  is the standard deviation of the sample results for stream A;  $S_{bII}$  is the standard deviation of the sample results for stream B, etc.

Calculations:

The average of the samples for stream A is calculated as (others similar):

$$a_{II} = \frac{ya_1 + ya_2 + \dots + ya_n}{n_{II}}$$

The standard deviation of the samples for stream A is calculated as (others similar):

$$S_{aII} = \sqrt{\frac{(ya_1 - a_{II})^2 + (ya_2 - a_{II})^2 + \dots + (ya_n - a_{II})^2}{n_{II} - 1}}$$

46.c. Calculate the pooled standard deviation for each stream as follows:

$$\text{Pooled standard deviation for stream A: } S_a = \sqrt{\frac{(n_I - 1)(S_{aI})^2 + (n_{II} - 1)(S_{aII})^2}{(n_I + n_{II} - 2)}}$$

Pooled standard deviation for stream M: 
$$S_m = \sqrt{\frac{(n_I - 1)(S_{mI})^2 + (n_{II} - 1)(S_{mII})^2}{(n_I + n_{II} - 2)}}$$

note:  $n_I$  and  $S_{aI}, \dots, S_{mI}$  are defined in Condition 45.

46.d. Calculate the "t" statistic for each stream as follows:

$$t_a = \frac{(a_I - a_{II})}{S_a \sqrt{\frac{1}{n_I} + \frac{1}{n_{II}}}}$$

$$t_m = \frac{(m_I - m_{II})}{S_c \sqrt{\frac{1}{n_I} + \frac{1}{n_{II}}}}$$

46.e. Calculate the degrees of freedom (df), as follows:

$$df = (n_I + n_{II} - 2)$$

46.f. Select  $t_{0.05}$  from the table below\* for the number of degrees of freedom calculated above.

Df	$t_{0.05}$	df	$t_{0.05}$	df	$t_{0.05}$	df	$t_{0.05}$
5	2.015	16	1.746	27	1.703	38	1.687
6	1.943	17	1.740	28	1.701	39	1.685
7	1.895	18	1.734	29	1.699	40	1.684
8	1.860	19	1.729	30	1.697	41	1.683
9	1.833	20	1.725	31	1.696	42	1.683
10	1.812	21	1.721	32	1.694	43	1.682
11	1.796	22	1.717	33	1.693	44	1.681
12	1.782	23	1.714	34	1.692	45	1.681
13	1.771	24	1.711	35	1.690	46	1.680
14	1.761	25	1.708	36	1.689	47	1.679
15	1.753	26	1.706	37	1.688	48	1.679

\* Note:  $t_{0.05}$  is the t-value for a one-tailed test at the 95 percent confidence interval for the selected degrees of freedom (df). If t-values are required for degrees of freedom not listed in this table, values shall be obtained from any statistical methods text or reference book.

46.g. Compare the t-values for each stream ( $t_a, t_b, \dots, t_m$ ) to  $t_{0.05}$ .

If the t-value for a stream is less than or equal to  $t_{0.05}$ , the EF for that stream is verified.

If the t-value for a stream is greater than  $t_{0.05}$ , the EF for that stream is not verified.